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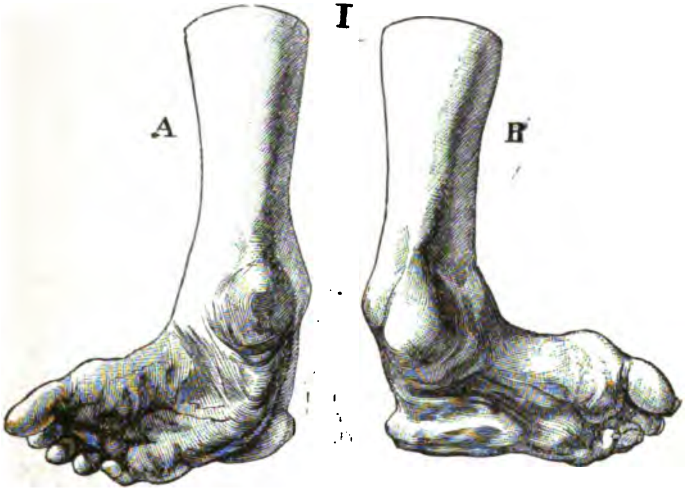
ARTICLE 1247.

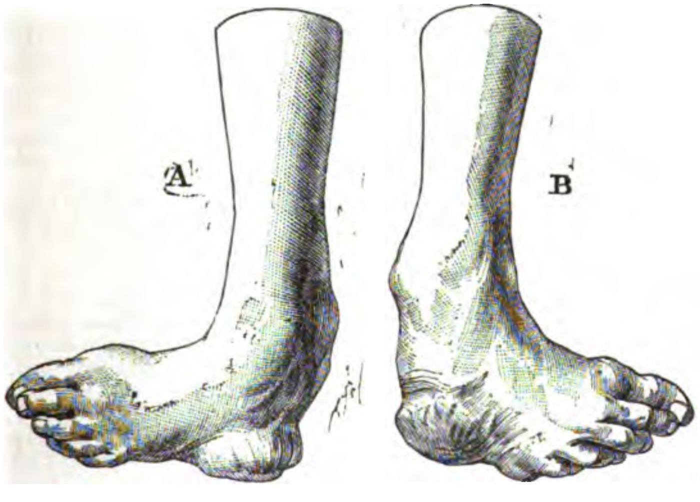
THIRIAR ON ORTHOPÆDIC SURGERY.*

IN a recent lecture on *Equino-varus and Posterior Tarsectomy*, Dr. Thiriar took for example a little girl, ten years of age, with both feet deformed and who was consequently only able to walk with the greatest difficulty. In both feet the deformity was well-marked equino-varus. The general health had always been excellent, the defect being congenital. In walking, the child rested on the outer border of the foot, the integument of which was consequently much thickened. Both legs were atrophied though their movements were perfect. Taking one foot as a subject for demonstration, Dr. Thiriar called attention to the enlargement of the foot in the region of the great toe, which formed a right angle with the leg. Looked at as a whole, the foot was shortened and atrophied and curved with the concavity inwards. The inner edge and the tip were strongly drawn up and the foot appeared to be folded on itself. The dorsal had become the external aspect, looking downwards and forwards, and was rounded and convex. The lower (plantar) surface was hollowed out and curved, looking upwards and backwards (fig. I). To the furrow which usually exists on this surface, was added a second longitudinal furrow which crosses the other. This was due to the lateral constriction of which the plantar arch was the seat. The heel was pointed and drawn up. Indeed it could hardly be said to exist; it was covered with a soft, smooth skin, indicating the absence of pressure.

I



II



On the superior and external aspect, instead of the concavity which ordinarily exists behind and above, in front of the malleoli, was to be seen a rounded and somewhat irregular prominence, beyond which was a slight constriction, and lastly another prominence, smaller in size and less rounded than the first. These prominences belonged to the astragalus.

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* By Dr. J. Thiriar, Chef de Service at the Hôpital St. Jean, Brussels, reported in *La Clinique*, 10 Mai, 1888.

Outside and below the head of the astragalus was a hard angular point, the angle of the calcaneum, which appeared to be hypertrophied. Between this angle and the heel could be felt a convex surface belonging to the outer surface of the calcaneum. In front of the projecting angle of this bone, a quadrilateral plane surface, belonging to the cuboid, could be felt. The internal malleolus was drawn forwards, and could hardly be felt. The external malleolus, on the contrary, was very prominent, though placed more posteriorly than usual.

The plantar aspect, of normal appearance, presented a tight band, due to the shortening of the muscles in that region, thus offering an obstacle to extension; and the plantar aponeurosis offered a further obstacle.

The virtual heel was situated on the outer border of the foot, on a level with the cuboid and its articulation with the fifth metatarsal bone. The tendo Achillis was slighter than normal, and projected behind when an effort was made to correct the deformity.

All attempts, under chloroform, to restore the proper shape of the foot had proved unsuccessful, the only effect being to increase the tension of the aponeurosis and tendo Achillis, showing clearly enough that the obstacle was not due exclusively to the resistance of the muscles. Even after division of these two structures, however, no effect could be produced. It became evident, therefore, that the treatment would have to be directed to the bony prominences just mentioned, which, from alterations in shape, prevented the return of the foot to the normal shape.

The lecturer then discussed the different varieties of club-foot, of which the equino-varus was the most common. Passing on to the pathology of this affection, he observed that the primary cause was still unknown. The important point, so far as treatment was concerned, was to distinguish between the congenital and the acquired forms of club-foot. He pointed out that it was undesirable to attach too implicit a confidence to the assertion of the parents as to the child having been born without the deformity, seeing that it might easily escape notice at a very early age. As the child grew up, the deformity became more apparent, and might then be noticed for the first time. The case under consideration was, however, undoubtedly congenital.

The importance of the distinction lay in the fact that while the paralytic forms of club-foot are amenable to mechanical treatment, combined with massage and electricity, and the spasmodic club-foot to tenotomy, the congenital club-foot requires serious operative measures in order to combat the osseous deformity. This osseous deformity was limited to the tarso-tibial articulation. All the muscles reacted to the electric current, although their development had been interfered with by the abnormal position of the bones.

The lecturer pointed out that the serious nature of the deformity, from a physical and social point of view, justified operative interference. As a general rule, the sooner treatment was commenced the better, the tendency being for the deformity to be increased by interference with the normal development of the bones. If taken in hand soon after birth, simple tenotomy and suitable appliances, often sufficed to effect a cure. At a later period, the treatment became more complicated, tenotomy of the muscles often being necessary. In the case under discussion the deformity had long ceased to be amenable to any such methods of treatment.

The lecturer pointed out that the principal cause of the deformity was the astragalus, which was in a position of forced extension and sub-luxation. The bone was fixed in this position by adhesions contracted by the anterior part of the pulley, which, deprived of its cartilage, had ceased to have any connection with the tibia and fibula. Moreover, it was no longer possible to return the enlarged anterior portion of the bone to its proper position in the narrowed tibio-fibular hinge. Under these circumstances no treatment short of posterior tarsectomy—*i.e.* extirpation of the astragalus, with compensatory resection, could be of any service. He observed that this operation, long considered to be both useless and dangerous, ought only to be resorted to in club-foot due to deformity of the bones. It consists in the resection of a certain number of the tarsal bones, calculated to remedy the deformity. It may be subdivided into two—anterior and posterior tarsectomy.

Anterior tarsectomy is performed on the first rank of tarsal bones—usually the cuboid, and less frequently the scaphoid (in valgus). It may be partial or total (cuneiform). In partial anterior tarsectomy the cuboid alone is removed, but in the total or cuneiform operation both the cuboid and scaphoid are involved, an osseous wedge of the front rank of the tarsal bone being taken away. The size and direction of this wedge varies according to the degree and the variety of the deformity to be remedied. He observed that this operation had yielded excellent results in the hands of certain English surgeons, but personally he preferred posterior tarsectomy, which gave rise to less permanent deformity, and did not interfere with the growth of the foot. This preference, he contended, was justified by the following considerations:—The vicious position of the astragalus being the fundamental cause of the deformity, nothing was more natural than to remedy it by removing that bone. This, however, was not sufficient in cases of equino-varus, it being also necessary to resect the anterior apophysis of the calcaneum and a part of the external malleolus, in order to restore the shape completely. The operation in its integrity is known as posterior cuneiform tarsectomy, and this was the operation which he proposed to perform in the case under consideration.

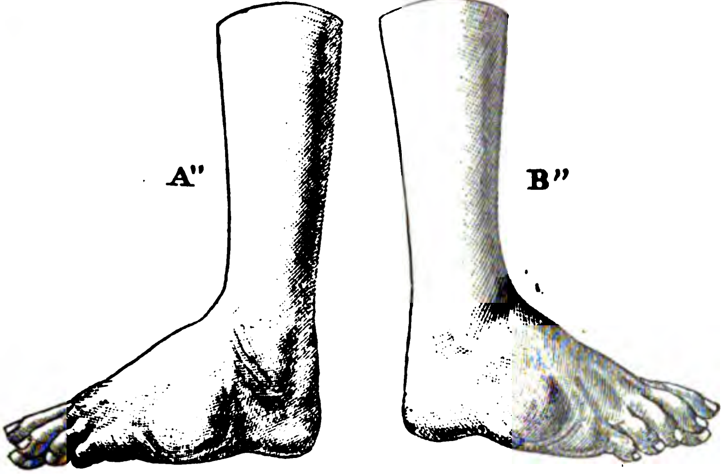
The first step would be to separate the astragalus from its attachments with the scaphoid, the calcaneum, and the tibio-tarsal articulation. The first is easy enough, but great difficulty is often experienced in severing the interosseous ligament uniting it with the calcaneum. The knife should be introduced on the flat and horizontally, in the sub-astragaloid groove. Great care is necessary to leave intact the tendons of the peroneal muscles. The difficulty of these steps is enhanced by existing pathological lesions, and a thorough knowledge of the anatomy of the deformity is essential to the proper performance of the operation.

He advised the most minute antiseptic precautions preparatory to making the first incision, from the external malleolus to the fourth metatarsal space. The soft parts are retracted by an assistant, and the disarticulation of the astragalus is proceeded with.

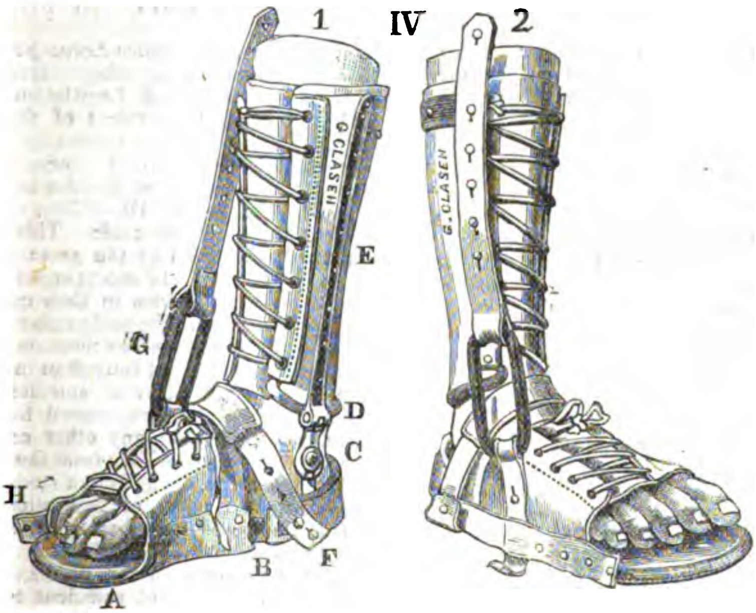
In Professor Gross's practice the wound is stuffed with iodoform gauze and a plaster bandage applied, the dressing being renewed every few days. He himself proposed to use a drain of decalcified bone, hoping thus to procure union by first intention, to be followed in a few weeks by an elastic traction apparatus.

The operation was performed on Nov. 18, 1887. The astragalus was removed without much difficulty, but it was found necessary to resect a piece of the external malleolus, and to gouge away some of the anterior portion of the calcaneum in order to permit of the foot being brought into a proper position. The foot was then placed at a right angle to the limb, the wound washed out with sublimate solution, and the edges brought together and secured by catgut sutures. A drainage-tube was placed in the lower angle of the wound, which was then dusted with iodoform, and dressed *secundum artem.* The patient progressed very satisfactorily, and on Dec. 9 the operation on the other foot was proceeded with. It was only found necessary to remove the astragalus and resect the malleolus in order to restore the shape. By Jan. 8 1888, both wounds had healed, and casts were taken of the feet, which offered a striking contrast with those originally taken.

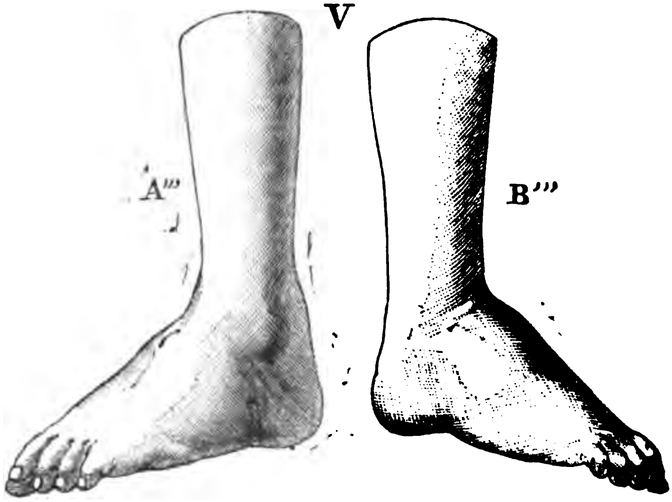
III



IV



The apparatus, manufactured by Mr. Clasen, were of two kinds—one for use in bed, and one for use in walking. The appliance for use in bed (Fig. IV., 1 and 2), which is only required for about a fortnight, consists (1) of a padded metal sandal, articulated laterally at the middle. It is intended to maintain the foot flat by means of two pieces of leather which lace together, and a strap, F, passing over the front of the ankle (Fig. III.) (2) Of two side splints, and a simple stirrup attached to the inside splint, E, and furnished with joints, C, D, on a level with the malleoli. The first permits the foot to be flexed on the leg, the second the tilting of the foot from within outwards. (3) Of a gaiter in moulded leather, laced, fixed to the splints and surrounding the leg (Fig. IV.) (4) Of a strap, G, with an elastic ring, so arranged as to counterbalance the tendency to equinism. (5) Of a second elastic strap which is fixed along the outer edge of the sandal, so that by moderate constant traction, the toes are drawn outwards (Fig. V.)

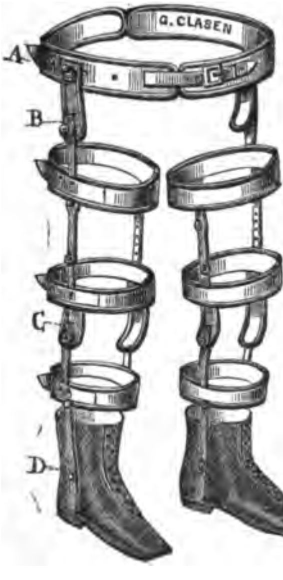


V

With this apparatus the feet soon assumed a normal appearance. By March 1 the child could walk very well, and, when provided with a walking-apparatus, was enabled to leave the hospital.

The feet were then normal in shape, the hypertrophy of the skin over the former site of pressure had almost disappeared, and walking was unembarrassed. The parents were recommended to allow the child to walk with the aid of the apparatus (fig. VI.) also manufactured by Mr. Clasen, which consists of :—

1. A pair of boots, the soles of which are thicker on the outer than on the inner side, the object of which is to turn the toes out in walking.



VI.

2. Of two double stirrups fixed to the boots and surmounted by side splints, jointed on a level with the malleoli and knees, and provided with straps.

3. Of a waistband A, with coxo-femoral joint connecting the right with the left leg.

In consequence of a special arrangement of the upper straps, the apparatus takes its support partly from the thigh, and partly from the pelvis. It, therefore, bears almost the entire weight of the body when walking or standing.

ARTICLE 1248.

CLARK BELL ON SUICIDE.

IN the *New York Medico-Legal Journal* for June 1888 appears, amongst other interesting articles, a paper on 'Suicide and Legislation,' by Mr. Clark Bell, the learned president of the Medico-Legal Society. This subject is treated by the author in an able and comprehensive manner. The steady increase in the number of suicides in France, according to the statistics of Dr. O'Dea, which are quoted at some length, is noticeable. This increase seems much more marked at the great centres of population, the agricultural districts apparently resembling those of other countries in their comparative freedom from suicides. The author gives no explanation of the larger number of suicides owing to domestic troubles in France and Italy than in other countries. The very high number of suicides in both sexes caused by forbidden love, quoted from the tables of Liste, nearly doubling any other cause, is remarkable, as differing so widely from the statistics given by Brierre de Boismont from a study of 4,595 cases. Regarding the effect of legislation on retarding suicide we should have been glad to receive Clark Bell's own views at greater length. The exceptional influences at work in the production of suttee in India we had thought sufficient to remove many cases from the classification of suicide. It is known that often the victim was drugged and insensible, and, not willing to become sacrificed, was thus murdered by being placed on the funeral pyre.

Perhaps the action of juries in England in returning a verdict of temporary insanity in all cases of suicide, in order to allow them to be buried in consecrated ground, is open to question, as removing some of the sentimental reasons against the act which, perhaps, had a deterrent effect in the days of verdicts of *felo de se* and its consequences. It is at least probable that many cases of self-destruction escape notice, and death is attributed to wrong causes. As illustrative of the high appreciation of the work of the Medico-Legal Society, Dr. H. Coutagne, in the *Archives de l'Anthropologie Criminelle*, for December 1888, alludes in terms of high praise to the work done by Clark Bell, the true leader of the Medico-Legal Society. He also very favourably criticises the articles appearing in the *Medico-Legal Journal* by other authors.

W. W. IRELAND, M.D.

ARTICLE 1249.

VORONIKHIN ON THE TREATMENT OF DIPHTHERIA.[*]

IN 1879 Dr. E. Wiss published a monograph (*Die Heilung und Verhuetung der Diphtheritis*) in which he most emphatically recommends his method of treatment of diphtheria. It consists in the internal administration of the following mixture: ℞ Sulphat. quinini, 0·4 to 0·6 gramme; aq. destill., 90 grammes; acidi hydrochlorici, guttas 3; ammonii muriatici, 6 grammes; syrup. cort. aurantior., 90 grammes. M.D.S. From a teaspoonful to a tablespoonful every two hours. In his own hands the method has proved actually infallible, one and all of his patients (except those in dying state) making a good recovery. The beneficial effects of the remedy are attributed by Dr. Wiss mainly (*a*) to a disinfecting and parasiticide action of quinine; and (*b*) to powerful anticatarrhal as well as antiseptic properties of chloride of ammonium. Shortly afterwards Dr. Lachmund stated (*Allgemeine Medizinische Central Zeitung*, No. 1, 1880) that he had employed Dr. Wiss's plan in 71 cases, of which 68 recovered and only 3 died (2 of them from a relapse). In 1885 Professor N. F. Fīlatoff, of Moscow, similarly expressed (*Lectures on Acute Infectious Diseases of Children*) a very favourable opinion on the method by which he had cured 4 cases of very severe scarlatinal diphtheria. In view of those statements, Dr. Nikolai A. Voronikhin, house-physician to the St. Petersburg Elizavetinsky Hospital for Children, has undertaken (*Proceedings of the St. Petersburg Society of Pediatrists for* 1887, vol. ii., pp. 67–189, 1888) clinical experiments on 48 successive cases of diphtheria, referring to children, aged from 1 to 16 years. Of 48, in 38 the disease was wholly independent from scarlatina, while in 10 diphtheria either complicated the course of scarlet fever or was immediately preceded by the latter. Of 38 non-scarlatinal cases, in 32 there existed a fibrinous form of the affection, and in 6 a phlegmonous or gangrenous one. Following Drs. Wiss's and Lachmund's instance, Dr. Voronikhin employed, besides the mixture, local irrigations or gargling with solutions of boracic acid or chlorate of potassium, as well as insufflations of camphor (as recommended by Moly). The results were these. A. *Non-scarlatinal diphtheria.* Of 32 fibrinous cases, 25 (21 faucial and 4 laryngo-faucial) recovered, and 7 or 21·9 per cent. (all laryngo-faucial) died. Every one (100 per cent.) of 6 phlegmonous cases ended in death. The average percentage of deaths, therefore, amounted to 34·2. B. *Scarlatinal diphtheria.* Of 10 cases only 1 recovered, the remainder (90 per cent.) died. Having thus found that his results were widely different from those of Drs. Wiss, Lachmund, and Fīlatoff, Dr. Voronikhin undertook a comparative inquiry into therapeutic results obtained from all other antidiphtherial methods which had been resorted to in the Elizavetinsky Hospital during the period 1867–85. As the matter presents great practical interest, the following essential details may be briefly given. I. *Reitz's Method* (consisting in the internal administration of thymol after this formula. ℞ Acidi thymici puri, gr. j.; aq. destill. ℥iij.; spirit. vini rectificati, glycerini puri, ana ʒij. M.D.S. A teaspoonful from eight to ten times a day, according to the child's age). It was employed in 93 cases of fibrinous diphtheria, with 53 recoveries (51 non-laryngeal, 2 laryngeal) and 40 (43 per cent.) deaths (26 non-laryngeal, 14 laryngeal); and in 29 of a phlegmonous variety, with 3 recoveries and 26 (92·8 per cent.) deaths, the average mortality being 54·5 per cent. II. *Perchloride of Iron* was given (internally, after the formula: ℞ Olei Martis, Ph. Ross., guttas xii.; aq. destill. ℥iij. M.D.S. Six dessert-spoonfuls daily) in 56 fibrinous cases, with 39 recoveries (all non-laryngeal) and 17 (30·3 per cent.) deaths (all laryngeal); and in 32 phlegmonous with 4 recoveries and 28 (87·5 per cent.) deaths, the average mortality being 51·1 per cent. III. *Chlorate of potassium* was used internally, in the daily dose of from ℈j. to ʒj., in ℥iij. of water) in 39 fibrinous cases with 16 recoveries (14 non-laryngeal) and 23 (60·5 per cent.) deaths (9 laryngeal); and in 2 phlegmonous with 2 (100 per cent.) deaths, the average mortality being 62·5 per cent. IV. *Quinine* (internally) was tried in 28 fibrinous cases with 18 recoveries (non-laryngeal) and 10 (35·7 per cent.) deaths (all laryngeal); and in 6 phlegmonous with 6 (100 per cent.) deaths, the average mortality being 47 per cent. V. *Hydrochloric acid* was employed (internally, alone or with ethereal tincture of valerian) in 13 fibrinous cases with 11 recoveries (10 non-laryngeal) and 2 (15·4 per cent.) deaths (1 laryngeal); and in 1 phlegmonous with 1 death, the average mortality being 21·4 per cent. VI. *Chlorine water* was used (internally, 4 or 6 drops several times a day) in 13 fibrinous cases with 10 recoveries (9 non-laryngeal) and 3 (23 per cent.) deaths (1 laryngeal); and in 1 phlegmonous with 1 death, the average mortality being 33·3 per cent. VII. *Henoch's method* (consisting in a combined internal use of chlorine water with a decoction of quina bark) was tried in 10 fibrinous cases with 6 recoveries and 4 (40 per cent.) deaths; and in 1 phlegmonous ending fatally, the average mortality being 45·4 per cent. VIII. *Benzoate and salicylate of sodium* were given (internally, after the formula: ℞ salicyl. sod. ℈ij.; benzoat. sod. ʒss.; aq. destill. ℥iij. M.D.S. A dessert-spoonful every 2 hours) in 9 fibrinous cases with 7 recoveries (non-laryngeal) and 2 (22·2 per cent.) deaths (laryngeal); and in 4 phlegmonous with 4 (100 per cent.) deaths, the average mortality being 46·1 per cent. IX. *Davydoff's method* (hydrate of chloral in small doses, internally; *vide* the LONDON MEDICAL RECORD, 1882, p. 270) was resorted to in 3 fibrinous (laryngeal) cases with 3 deaths. X. *Monti's method* (ferro-citrate of quinine, internally) was employed in 1 fibrinous case with success, and in 1 phlegmonous unsuccessfully. XI. *Turpentine-oil* (internally) was tried in 1 phlegmonous case, but without success. XII. *Mixed treatment* (thymol alternately with perchloride of iron; or chlorate of potassium with the perchloride; or thymol with the chlorate, &c.) was practised in 31 fibrinous cases with 18 recoveries (non-laryngeal) and 13 (41·9 per cent.) deaths; and in 16 phlegmonous with 1 recovery and 15 (93·7 per cent.) deaths, the average mortality being 59·5 per cent. XIII. *Koszutski's method* (local irrigations with a 5 or 10 per cent. solution of chloride of sodium, and subsequent insufflations of *calomel vapore parati*) was resorted to in 12 fibrinous cases with 10 recoveries (non-laryngeal) and 2 (16·6 per cent.) deaths; and in 7 phlegmonous with 7 (100 per cent.) deaths, the average mortality being 47·3 per cent. XIV. *Oxide of zinc* (insufflation) was used, as an adjuvant, in 14 fibrinous cases with 7 recoveries and 7 deaths, and in 4 phlegmonous with 4 deaths, XV. *Naphthalin* (insufflation) was employed, as an adjuvant, in 2 (thymol) fibrinous cases with 1 recovery and 1 death. XVI. *Camphor* (2 parts) *with oxide of zinc* (1 part) was used (insufflation), as an adjuvant, in 5 fibrinous cases with 5 recoveries, and in 5 phlegmonous with 3 recoveries and 2 deaths. XVII. *Iodoform* (insufflation, as an adjuvant) was tried in 13 fibrinous cases with 6 recoveries and 7 deaths; and in 6 phlegmonous with 6 deaths. XVIII. *Jeanneret's method* (painting with a mixture of terebene and glycerine) was applied in 3 fibrinous cases with 3 recoveries; and in 4 phlegmonous with 4 deaths. XIX. *Resorcin* (painting with a solution of ʒj. to ℥j. aq.) was used in 2 fibrinous and 1 phlegmonous cases with 3 deaths. XX. *Sublimate corrosive* (painting with a solution of 1 grain to 1 ounce of water) was resorted to in 12 fibrinous cases with 9 recoveries and 3 deaths; and in 7 phlegmonous with 1 recovery and 6 deaths. In a fibrinous case the drug was inhaled, and in another injected under the skin; both died. The following table gives the mortality (arranged in an ascending order) under the main methods used:—

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[*] Observations on the Treatment of Diphtheria after Dr. Wiss's Method, and Comparison of Results of the Treatment of the Disease after some other Methods which had been Employed in the Elizavetinsky Hospital for Children during 1867–86. (*Proceedings of the St. Petersburg Society of Pediatrists for* 1887, vol. ii., p. 67, 1888.)

	Average Percentage.	Percentage of Fibrinous Diphtheria.	Percentage of Phlegmon Diphtheria.
Hydrochloric Acid	21·4	15·4	100·0
Aq. Chlori	33·3	23·0	100·0
Wiss's mixture..........	34·2	21·9	100·0
Henoch's method	45·4	40·0	100·0
Benzoate and salic. of sodium	46·1	22·2	100·0
Quinine	47·0	35·7	100·0
Koszutski's method	47·3	16·6	100·0
Perchloride of iron......	51·1	30·3	87·5
Thymol	54·5	43·0	92·8
Mixed treatment........	59·5	41·9	93·7
Chlorate of potash	62·5	60·5	100·0

To elucidate the matter still further, Dr. Voronikhin brings forward the following figures. During the said period (1867–85) the total number of diphtheritic cases admitted to the hospital amounted to 442. Of the number 210 (69 boys, 141 girls) recovered, while 232 (106 boys, 126 girls), or 52·4 per cent., died. In 340 cases the patients were suffering from fibrinous diphtheria; 40·3 per cent. of them died. The remaining 102 cases belonged to a phlegmonous or gangrenous variety, their mortality being as high as 93·2 per cent. Of 340 fibrinous cases, in 279 the larynx was intact; only 29·3 per cent. of them died; in the remaining 61 cases the larynx was involved, the mortality being 88·5 per cent. Confronting the figures with those referring to his therapeutical statistics, Dr. Voronikhin draws the following general conclusion from his researches. 'Till the patient's larynx remains intact, or the disease runs its course under a fibrinous form, the percentage of death may be relatively low, and any treatment, including that by hydrochloric acid, can afford relief; but when the larynx is involved, or diphtheria assumes a phlegmonous form, the disease tends to end fatally, whichever treatment might be resorted to. Hence, only the latter severe cases can and must serve as a criterion for determining the actual value of any therapeutic methods.' On the whole Dr. Voronikhin's general views concerning treatment of diphtheria are identical with those of Professor Henoch, as laid down in his *Vorlesungen ueber Kinderkrankheiten*, 1887, p. 721. Mild cases are said to recover spontaneously, while severe ones cannot be impressed upon by any therapeutic means yet known.

V. IDELSON, M.D.

ARTICLE 1250.

KÜRTCHINSKY ON PERCHLORIDE OF IRON IN DIPHTHERIA AND ANGINAS.*

IN the *Vratch*, Nos. 8 and 10, 1888, pp. 148 and 182, Dr. V. P. Kürtchinsky, of Oster, details his experience in regard to the treatment of diphtheria by the internal administration of perchloride of iron. The following formula was invariably used:—℞ Liquor ferri. sesquichlorati, Ph. Ross., ℈ij.; glycerini purissimi, ℥ss.; aq. destill., ℥vj. M.D.S. Half a teaspoonful to infants, a teaspoonful to older children, a dessert-spoonful to an adult, every half an hour, day and night. Of 56 cases (all of a more or less severe description) treated by this plan, only 6 (10·7 per cent.) died, in 3 of which the mixture had been administered very irregularly (only a couple of doses daily). Since a regular—that is, very frequent—administration constitutes a condition *sine quâ non* for a successful treatment, the writer feels justified in excluding the 3 cases from his consideration. Of the remaining 3 fatal cases, 2 recovered from the disease under the iron treatment, to die shortly afterwards, 1 from supervening endocarditis, the other from a relapse treated by tincture of iodine. Hence, the actual number of the author's test cases amounts to 53, with only 1 (1·9 per cent.) death. In none of the 56 cases were any unpleasant accessory effects ever observed, even when a daily dose of the perchloride administered to a child of 1½ was as large as 2 scruples. In a majority of the cases the author had to deal with a fibrinous variety of the affection, the remaining being of a septic phlegmonous form. The epidemic (occurring at the village Krekhovo) was generally of a severe nature, a number of cases left without any treatment, or treated after other methods, ending in death. On the whole, Dr. Kürtchinsky comes to the conclusion that 'the perchloride represents a most powerful remedy for diphtheria, and that not only in the beginning of the disease, but even when diphtheritic coats and pseudo-membranes have already attained a considerable extension.' In almost all successful cases a striking improvement takes place in a day or two, the pseudo-membranes falling off about a third or fourth day, and a complete recovery ensuing within a week or so. Such truly brilliant results obtained from the treatment are attributed by Dr. Kürtchinsky to 'a purely *local* sterilising action' of the drug on the tissues pervaded by the pathogenic microbe. Be his explanation correct or not, the writer has found the method superior by far to all other means tried by him previously, such as the internal use of corrosive sublimate, benzoate of sodium, or turpentine oil, various gargles, inhalations, sprays, and cauterisations. The latter (external) methods have been found by the author, on the one hand, harmful on account of their local traumatic effects, and, on the other, positively impracticable amongst a poor and ignorant peasant and artisan population which supplies the greatest contingent of diphtheritic cases. Exactly the same plan of treatment has proved most successful in Dr. Kürtchinsky's hands in a vast number of various anginas prevailing endemically at his locality. In *catarrhal sore-throat* a pronounced improvement is noticed literally after the first two or three spoonfuls of the mixture, the affection being over sometimes after one day's treatment. *Scarlatinal angina* yields almost as rapidly to the remedy, never passing 'into any serious or diphtheroid forms.' In *mycotic angina*, which occurs over the district in the shape of tonsillitis with follicles filled up with offensive caseous plugs, the author (or the patient himself) first presses out the plugs, and then proceeds with the administration of the steel mixture, which 'contracts the dilated follicles, prevents any formation of new colonies of the pathogenic fungi, and, as in angina of all other varieties, decreases local congestion and irritation.' In *phlegmonous angina* the mixture 'proves powerless to prevent threatening suppuration, but its administration relieves all symptoms of irritation (both before and after a spontaneous or surgical opening of the abscess) as no other means is able to do.' *Herpetic angina* seems to show the greatest resistance to the treatment in comparison with all other varieties. 'Its duration does not appear to be shortened by the mixture, but still all painful subjective symptoms subside swiftly and strikingly, while swallowing simultaneously becomes free and painless.' Following the writer's recommendation, Drs. A. A. Krasovsky, K. V. Krasovsky, and M. I. Stefanovitch, of Oster, and Drs. M. N. Motrokhin, V. S. Novitzky, and V. P. Sokoloff, of Kozeltz, have tried the iron treatment in numerous cases of diphtheria and angina (some of which concerned the practitioners themselves) and arrived at the same conclusions. Pointing to all those results, Dr. Kürtchinsky warmly appeals to all medical men to try on an extensive scale this simple and easy, convenient, innocuous, and cheap method, which is very likely to prove 'the most effective means for the struggle against one of the most formidable scourges of mankind, and that especially so if the remedy be resorted to in every case of any angina from the very beginning of symptoms.' In the Oster District, at all events, the iron mixture has already become a household medicine, which is kept in stock at many houses, the compound being fairly stable. [Liquor perchlor. ferri, S. ferrum sesquichloratum solutum, Ph. Ross., is prepared by dissolving the perchloride in an equal part of distilled water—that is, the preparation contains about 30 per cent. of an anhydrous salt, or 10 per cent. of metallic iron, its specific gravity being from 1·290 to 1·300. The remedy was first recommended in diphtheria by Gigot in 1848, and, later on, powerfully advocated by Professor Abraham Jacobi, of New York. As is shown in Dr. R. Neale's *Medical Digest*, sect. 822 : 1, the perchloride treatment was successfully practised also by Drs. Hother, Greenhow, Noir, Prangley, Bell, Macdonald, Hicks, Mackenzie, Lowndes. According to Dr. Hermann Hager's *Handbuch der Pharmaceutischen Praxis*, vol. i. p. 1053, Clar recommended in croup and diphtheria the so-called glycerolatum martiatum, that is, a mixture of 2·5 grammes of liq. ferri sesquichlor., Ph. Germ., with 97·5 grammes of glycerine, to take a coffee-spoonful every half an hour, day and night. In the LONDON MEDICAL RECORD, May 1886, p. 205, Dr. N. E. Davies's paper may be found, in which a mixture containing 6 drachms of perchloride of iron to 5 ounces of sugared water, a dessert-spoonful every hour, is eulogised as the best remedy for diphtheria. In the *Vratch*, No. 3, 1885, p. 39, Dr. N. I. Lünin, house physician to the Prince of Oldenburg's Hospital for Children, St. Petersburg, states that, following Professor A. Jacobi's recommendation, he has tried the perchloride in 94 cases of diphtheria (in 43 of a fibrinous, and in 51 of a septic phlegmonous variety) referring to children aged from 1 to 12. The drug (liq. ferri sesquichlor., Ph. Ross.) was given from 1 drop every 2 hours, to 2 drops every half hour, or in a daily dose varying from 1 to 8 grammes. Simultaneously, gargling with a 3 per cent. boracic acid solution, every hour, before taking the perchloride, was administered. Of 43 fibrinous cases, 14 (39·5 per cent.). and of 51 phlegmonous, 39 (78·4 per cent.) died, the total number of deaths being, therefore, 53 (56·3 per cent.). As regards the action of the perchloride on diphtheritic false membranes, the latter disappeared in 4 patients after one day's treatment, in 5 after 2 days; in 5 after 3; in 5 after 4; in 4 after 6; in 6 after 7; in 1 after 8; in 2 after 9; in 2 after 10; in 1 after 13; and in 2 after 15. In one case a fibrinous variety of the disease passed into a phlegmonous one in the course of the iron treatment. Amongst Dr. Lünin's phlegmonous cases 8 were admitted in a dying condition. Abstracting them from the total number (51 − 8), we find that of 43 phlegmonous cases, 31 (72·1 per cent.) ended in death. From his comparative clinical experiments on the treatment of diphtheria by corrosive sublimate, resorcin, chinoline, bromine, turpentine oil, and perchloride of iron, Dr. Lünin draws the general conclusion that 'a fibrinous form of the affection should be treated best with turpentine oil, while in a phlegmonous one the perchloride should be preferred.' One cannot help thinking, however, that Dr. Lünin has been using the drug in too small doses. Indeed, in Professor Jacobi's paper, referred to by Dr. Lünin, it is recommended to give the drug up to fifteen drops every quarter of an hour.

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* Dr. V. P. Kürtchinsky on the Treatment of Diphtheria and Anginas. *Vratch*, Nos. 8 and 10, 1888, pp. 148 and 182.

[In the *British Medical Journal*, Sept. 22, 1888, p. 652, the illustrious pediatrist says:—'The tincture (of perchloride of iron) may be given a drachm daily to a baby a year old, much more to older ones.' According to *Sprimon's Meditzina* for 1886, vol. i., p. 579, and vol. ii., p. 710, the perchloride (in the form of tinctura ferri chlor., internally) plays an important part in the antidiphtherial methods proposed by Drs. Bigelow, Gleason, Smith (New York), Tipton, Da Costa, Stadnitzky. In the *Semaine Médicale*, No. 14, 1888, Dr. Mohammed-ben-Nekkach publishes 21 cases of diphtheria (19 children, 2 adults) treated after Aubrun's plan, consisting in an alternate internal administration of a solution of perchloride of iron and milk; a tablespoonful every five minutes. The daily dose of the perchloride was from 25 to 30 drops of liq. ferri sesquichlor., Ph. Gall., in a tumblerful of water; that of cow's milk a litre. Simultaneously, garglings with the same steel solution thrice daily, and occasionally emetics were used. Only one of the 21 patients (a child of six months) died. Dr. Nekkach believes that the method is a 'specific' one for diphtheria. Dr. L. Bryhn, of Hedmarken, often saw (*Novosti Terapii*, November 1888, p. 350) very good results from the internal use of solutio ferri sesquichlor. spirit., from 5 to 15 drops in a teaspoonful of water every two hours, combined with painting the patient's fauces with a warm 20 per cent. solution of boroglycerine, and garglings with a mixture of oil of eucalyptus (1 part) and benzoate of sodium (3 parts) in 150 parts of water.—*Rep.*]

V. Idelson, M.D.

Article 1251.

BURDRAGHI ON MURDER AMONGST THE INSANE.*

Dr. Burdraghi, in a contribution on murder among the insane, collates statistics drawn from the records of the Broadmoor Asylum in this country and from those of Drs. Sommer, Sander, and Richter in Germany, Le Grand du Saulle in France, and Tamburini in Italy. These furnish altogether 195 cases of homicide of which Broadmoor supplied 122. Only 2 of these were cases of so-called 'transient mania,' the great majority having been 'melancholic' (lypemania). Eighteen per cent. were associated with epilepsy, and 1 was an example of 'anthropophagy.' In 58 per cent. the murdered persons were relatives, and in 42 per cent. strangers. The youngest murderer was only 4 years old, a girl, who threw into the fire an infant she was left to mind; the oldest was 70 years of age; the majority (30) between 30 and 40 years.

As to sex, 75 per cent. were men and 25 females; 17 were quite illiterate, and 61 very imperfectly educated. Religious delusions were present in 12, and in 5 of these were the immediate motive of the crime; 25 laboured under hallucinations, and 14 had been previously insane. Fifteen were instances of plural homicides, one individual having perpetrated no fewer than 11. In 19 no motive could be assigned. That even excessive joy may subvert the reason is proved by one instance of a man (Zoher) who, having unexpectedly come in for a fortune of 10,000,000 (marks?), killed his wife and children. In 14, a surprisingly small proportion, was the act premeditated, and in these, as in 15 per cent. of the whole, considerable ingenuity was shown in its execution. Twenty-seven sought concealment in flight, but all sooner or later returned. Three only attempted to prove an *alibi*. Twenty-three prevaricated, but of these 12 had lost all recollection of their acts, 67 remembered them, but in the cases of 14 they were committed under the influence of hallucinations; 14 others, though cognisant of what they had done, were of very weak intellect, and one was a case of temporary mania. Fifty-four exhibited more or less remorse, but of these 46 failed to realise the heinousness of their crimes; seven gloried in them; 23 attempted to exculpate themselves; 13, undoubtedly of weak intellect, simulated insanity; 11 of these were subsequently transferred from the madhouse to the gaol, and 6 in all succeeded in escaping from asylums. Seventy-eight of the hundred homicides were acquitted of responsibility on the ground of insanity, 15 were pronounced to be *partially* accountable for their acts [a verdict recognised by German law—*Rep.*] and sentenced accordingly to various terms of imprisonment, while 8 were found guilty of murder.

Nardelli relates a case of homicide attributable to latent epilepsy (*Ep. larvata*). The subject, though of a neurotic and mentally affected family, had never had any decided epileptic seizures, but the circumstances of the act, committed in the presence of witnesses, and followed by coma lasting for three hours and by complete amnesia, together with his bodily character and other facts, left no doubt as to the epileptic origin of the act.

(*Id. loc.*) *Hypnotism of Insane Criminals.*—Dr. Algeri gives an account of several cases in which hypnotism was performed on insane criminals. In two a single sleep only was obtained. In another the first operation induced a convulsive attack, and it was only at the second sitting that suggestions could be made. In his sleep the subject told the story of the crime quite as circumstantially as when awake, but added several details as to which he had previously been silent, admitting that he had actually assisted in the murder of the victim of which, when awake, he had maintained that he was merely a witness. Dr. Lombroso, however, observes that, though in this instance the hypnotic might have confessed the truth, such abnormal evidence should be received with caution, since a man who, when in possession of his senses, is given to falsehood, is not less likely to prevaricate when in the hypnotic sleep, and he is very sceptical as to the success, or even the expediency, of attempting to cure sexual perversions, such as the tendency to unnatural lust by 'suggestion,' when under the influence of hypnotism.

(*Id. loc.*) *A Homœopathic 'Mad' (?) Doctor.*—Dr. Lombroso prints for the entertainment of his readers a letter addressed to him by a Dr. Gallavardin, a homœopathic practitioner at Lyons, suggesting various drugs in the 200th dilution for the cure of the several forms of 'jealousy' so frequent among Dr. Lombroso's countrymen—*e.g.* for simple cases, nux vomica; for bad ones, lachesis; for jealousy with homicidal tendency, hyoscyamus; with envy, pulsatilla; with melancholy, staphysagria; and for a number of other criminal dispositions, hars, hepar, bell, lalub, lach, &c. (!!!).

E. F. Willoughby, M.B.

Article 1252.

KNAPP ON NERVOUS AFFECTIONS FOLLOWING INJURY.—'CONCUSSION OF THE SPINE,' 'RAILWAY SPINE,' AND 'RAILWAY BRAIN.'

In the November number of the London Medical Recorder a discussion on the above subject was reported as having occurred at the fourteenth annual meeting of the American Neurological Society. Dr. Philip Coombs Knapp read the paper which gave rise to that discussion, and of which the following is an abstract (see *Boston Medical and Surgical Journal*, Nov. 8, 1888).

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* *Archivio di Psichiatria, Scienze Penale ed Antropologia Criminale*, vol. iii., fasc. v. and vi. (Analysis of 195 homicides by 100 Lunatics.)

The predominance of the *Ego* in various conditions associated with more or less paralysis, and due to injury, has long been known, and these paralyses have been discussed under many different names, such as 'emotional paralysis,' 'paralysis dependent on idea' (Russell Reynolds), and the 'Schrecklahmung' of the Germans. Charcot brought these paralyses under the general category of hysteria, by producing at will precisely similar paralyses by suggestion, in hypnotised patients. He therefore considered that there was a similar condition of things, 'an obnubilation of the *Ego*,' in many paralyses following injury. The author is 'unable after a careful study of these cases, and of others by Rendu, Poupon, Lyon, and Berbez' . . . 'to trace any resemblance between them and the cases above cited (in an earlier part of his address) or the cases reported by German observers. There are three chief hysterical conditions (which might simulate affections following injury), viz. 'grand hysteria,' hysterical monoplegia, and articular neuroses, but the author has 'not seen these conditions appearing as the result of injury.'

The researches of Thomsen and Oppenheim have shown conclusively that hemi-anæsthesia is not pathognomonic of hysteria. The commonest symptom of sensory anæsthesia is peripheral limitation of the field of vision, and this has been found in all sorts of conditions. Moreover, in hemi-anæsthesia due to undoubted organic disease of the brain, transfer-phenomena have been excited by the application of metals, as shown by the committee (Charcot, Luys, and Dumontpallier) appointed by the Société de Biologie. Thomsen and Oppenheim oppose the hypothesis of hysteria on other grounds. 'To their argument that the anæsthesia is fixed and unvarying, and that the disposition is not that of the hysterical, Charcot has replied by citing cases where the anæsthesia in hysterical patients has lasted for years. Oppenheim's further objections, however, seem to be more conclusive. He finds that the patients are anxious, hypochondriacal, and depressed; complaining of headache, vertigo, and faintness, and occasionally of epileptiform attacks. They have pain in the back, anæsthesia and peripheral limitation of the field of vision, their movements are slow and feeble, and they try to keep their spines from jarring; there is often tremor; the vesical functions may be disturbed; the pulse is often rapid; in one case Oppenheim found unequal pupils, which did not react to light; in another, optic atrophy.' . . . 'Not only are these symptoms not hysterical, but they are not even functional; and Oppenheim justly argues that if they be ranked as hysterical, the firmest pillars of our knowledge are overturned.' Westphal agrees with Oppenheim. Oppenheim concludes (*Berliner klin. Wochensch.*, No. 9, 1888, reported in the LONDON MEDICAL RECORDER for April 20, 1888) that the cases, with signs of undoubted organic disease, such as immobile pupils, optic atrophy, and vesical symptoms are in the minority, and that most cases represent, 'not a typical neurosis like hysteria or neurasthenia, but a more general and complex psycho-neurosis, from which the patient seldom recovers.'

Dr. Knapp states that in the cases reported by him to the meeting the leading symptoms were certainly not those of hysteria. They rather agreed with the symptoms given by Oppenheim, but some were more suggestive of organic than functional disease. 'It seems to me,' continues the author, 'that the theory of an organic lesion, possibly the lesions suggested by Westphal, is the one which is the most satisfactory in many of these cases. Bramwell, who is certainly sceptical as to the frequency of organic change, suggests that there may be multiple capillary hæmorrhages in the brain and cord, which give rise to inflammatory processes, and finally to sclerosis. These hæmorrhages are so small as easily to escape notice. In several cases (Charenton accident, 1881) Vibert found very abundant punctate hæmorrhages in the upper part of the body, and suggests that they arose from lesion of the nerve-centres. Page, however, asserts that in these railway cases *mors silet*, which is as correct as many of his statements.' Mendel experimentally readily produced punctate hæmorrhages by fastening animals on a rapidly revolving table, and general paralysis by slower revolutions for a few minutes daily for some weeks.

Bernhardt has reported a case in which symptoms of general paralysis followed upon a railway accident. Fürstner has repeated Mendel's experiments, and confirms this observer in the *post mortem* appearances.

The symptoms due to organic disease are often masked by symptoms due to the neurasthenic condition, as indeed may occur in cases not due to injury. But these two great classes of symptoms are the best division, viz., those due to organic changes in the central nervous system, and those due to functional disturbance. The *psychical disturbances* belonging to the latter, and by no means rare, are usually the effect of shock in appalling accidents affecting a large number of people. Thomsen's case of 'acute railway-brain' represents an extreme degree of psychical disturbance. 'Immediately after the accident there were maniacal symptoms, with absolute and complete anæsthesia, confusion, and delusions of persecution.' Later on, the maniacal symptoms disappeared, together with most of the anæsthesia. The *chronic neurasthenic state*, common after any severe injury, may last for years. The patient 'may present no objective symptoms, but he is an utter wreck.'

'I have not spoken as yet' (the author continues) 'of the subject of strain of the muscles of the back, upon which so much stress has been laid by Page. It is, I believe, the chief source of the marked rigidity of the spine so often seen, and by it or by "spinal irritation" is to be explained the spinal tenderness so often met with, for spinal tenderness has as little to do with disease of the cord as pain in the back has to do with renal disease. Although, however, it is often present, I believe that it usually exists as a complication and not as the sole cause of the symptoms. Page seeks to ascribe incontinence and impotence to the strain alone, but I am unwilling to accept his conclusions. With strain of the muscles of the back there may be a little difficulty in emptying the bladder, but, when there is pain only on motion, I cannot see how the strain should paralyse the sphincters. Impotence is so common in all conditions of pain or weakness as to be of no significance. Strain of the muscles may often present such prominent symptoms as to mask the symptoms of nervous disturbance that lie beneath, yet I believe that careful inquiry will, in most cases of "concussion," reveal symptoms referable to the nervous system. As to Page's claim that these cases do not recover owing to excessive doses of bromide of potassium, it is too much the argument of the railway attorney to merit consideration.

'Of differential diagnosis I will say but little, because there is so much to say that it might easily fill a book; nor will I dwell upon the possibility of simulation, which has been so prominent in the minds of some writers as almost to conceal the fact that there was a real affection to be simulated. It is perhaps needless to add that all objective symptoms which indicate structural disease should be noted with care: the pupils and the optic nerve, the electrical reactions, the condition of the reflexes, the presence of tremor, especially fibrillary tremor of the face and tongue, ataxia, and Romberg's symptom. It should also be borne in mind that peripheral limitation of the field of vision, which is regarded by Thomsen and Oppenheim as one of the most constant attendants upon anæsthesia, and is considered by Charcot one of the chief stigmata of hysteria, may be the earliest recognisable manifestation of atrophy of the optic nerve.

'In spite of the most rigid examination, however, there are many cases which furnish us no objective signs, notably the cases of purely psychical disturbance, and the conditions of neurasthenia, the purely "functional" affections. Here we can say only this, that if the patient's statements be true, he has suffered severe and perhaps incurable injury. If in such cases, we had the opportunity of long-continued and constant observation, we would be in a better position to judge of the patient's veracity; but it may be as difficult to decide, and may require as long-continued study, as in certain cases of insanity.

'The prognosis in these cases varies, of course, with the character of the affection.' . . . 'In the majority of cases the symptom-complex is something like this: the patient has headache and vertigo; he is depressed, irritable, and hypochondriacal, with a diminished power of application; he may have some visual disturbance, he often has a contracted field of vision and occasionally optic atrophy; there is some tremor and perhaps incoordination; he has anæsthesia, usually not limited to one half of the body, and with it numbness and prickling; his movements are slow and weak; his tendon reflexes are exaggerated; there is often some lack of control over his bladder; and he may have pain and stiffness in the back from muscular strain. Here I believe the condition is due to a disseminated miliary sclerosis, or, in the early stages, to a hæmorrhagic or inflammatory process. The prognosis is like that of multiple sclerosis. With rest, freedom from excitement—such as comes when litigation is over and the anxiety about money matters is settled—and judicious treatment the patient may improve. The same holds true of tabes dorsalis. The ultimate prognosis is bad. Oppenheim has never met with a recovery; Gowers has found a good many cases where 'damages' have not brought about a cure, and considers that where there has been a late or gradual onset of symptoms there is far less tendency to arrest or subsidence than with earlier lesions; and Strümpell, in his latest edition, warns us against regarding these conditions as mild or insignificant. "The patients actually suffer greatly from them, and the suspicion of exaggeration and simulation is certainly much more rarely justified than it is pronounced."

'The following conclusions seem justifiable:—

'1. Concussion of the spine, in the strict sense of the term, although probable, is still a matter of doubt.

'2. Muscular strain, spinal irritation, and peripheral neuritis are not uncommon complications.

'3. Injury may give rise, not only to gross mechanical lesions of the central nervous system, with symptoms coming on soon after the accident, but also to typical chronic degenerative processes of insidious onset.

'4. Injury may also give rise to various functional affections of the nervous system, including psychoses, hysteria, and neurasthenia.

'5. Hemi-anæsthesia is not pathognomonic of hysteria, but is found in other conditions.

'6. Psychical disturbances—anxiety, hypochondriasis, depression, emotional disturbance, and lack of power of application—may exist alone or in conjunction with other affections.

'7. The neurasthenic state is often produced by injury, but true hysteria is rare.

'8. Both the hysterical and the neurasthenic states may be superimposed upon organic disease, obscuring the diagnosis.

'9. There is a fairly typical symptom-complex, with psychical disturbances, paræsthesia, anæsthesia, slow and feeble movements, exaggerated reflexes, &c., which is not uncommon, and is probably due to organic disease.

'10. The prognosis of these conditions is grave. Improvement is not uncommon, but complete recovery is rare.' E. J. EDWARDES, M.D.

ARTICLE 1253.

REGINALD HARRISON ON PERINEAL LITHOTRITY.

IN a paper* read before the Medical Congress at Washington in the present autumn Mr. Harrison draws attention to an important modification of the operation of litholapaxy, and we feel that his remarks are of great practical value. In his short paper he says, after some preliminary remarks: One great advantage lithotomy possesses over lithotrity is that it permits the operator to ascertain the condition of the bladder and prostate, and to satisfy himself, by the use of his finger, that every fragment of stone has been withdrawn. The absence of this process in lithotrity is an important circumstance in explaining why recurrences or relapses should be more frequent after crushing than cutting operations. In a personal experience of lithotrity which, though not large for statistical purposes, includes considerably over one hundred examples in different males, I infer, not only that the liability to relapses after lithotrity is greater than after cutting operations, but that such recurrences are, as a rule, traceable to some purely mechanical cause which either the operation or the operator fails to meet.

In a paper* by Mr. Donald Day, of Norwich, 'On Repeated Lithotomy,' he analyses the cases of recurring stone, at the Norfolk and Norwich Hospital, in 1,024 individuals. He divides these recurrences into four groups, in the order of their frequency, viz., (A) stones formed quite independently of the previous ones; (B) stones undetected at the first operation, and (C) stones formed on a fragment left behind at former operations; group (D) includes stones of bladder formation, due to chronic cystitis. Though the figures from which my own conclusions, in reference to this point, are insignificant compared with those at Mr. Day's disposal, they tend to support his classification, with this difference, that as my stone cases have been drawn from an area which, unlike the eastern counties of England, is not favourable for the development of calculus, I should put the spontaneous recurrence of stone, independently of a previous operation or other assignable cause, at the bottom of my list instead of at the top.

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* *British Medical Journal*, Feb. 13, 1886.

Taking the fifty cases of recurring stone in Mr. Day's analysis, twenty of these belong to group A, where the stones appear to have formed independently of the previous ones, thus leaving thirty cases where the recurrences were due to local causes, including undetected stones, stones formed on fragment left after the previous operation, and cystitis. It will thus be noted that three-fifths of the recurrences, or three out of the four groups, were traceable to purely local causes in which the bladder, including its outlet, was involved. Though these figures of Mr. Day's only include lithotomy cases, they will also apply to lithotrity, but with probably a greater force. From the careful examination of evidence of this kind, as well as from clinical observation, it appeared that if the advantages of litholapaxy could be combined with those of lithotomy, so far as the latter proceeding relates to the digital exploration of the bladder, that much advantage would follow the adoption of such a procedure in certain cases where a recurrence after lithotrity might almost with certainty be anticipated, by reason of the existence of structural complications, which the operation of crushing did not attempt to cope with. For this purpose, perineal litholapaxy seemed to be well suited, inasmuch as it would permit of (1) the digital exploration of the bladder and associated parts, both before and after the removal of the stone; (2) the rapid evacuation of the stone; and, (3) the drainage and irrigation of the bladder, should this prove necessary. It appeared that all this could be accomplished by a perineal urethrotomy, without encroaching on the neck of the bladder, as far as the necessary incision was concerned. Such a proceeding is thus referred to by Dr. Gouley, of New York,* who, writing in 1873, says 'the name of perineal lithotrity was given in 1862 by Professor Dolbeau, of Paris, to an operation completed in one sitting, by which the membranous portion of the urethra is opened, the prostate and neck of the bladder dilated, instead of being cut, and a large stone crushed, and the fragments immediately extracted.'

I have now had occasion to perform this operation in a somewhat modified form, presently to be described, in four cases of stone in the bladder; in three of these the prostate was large, and I was desirous of draining the bladder after the stone had been removed; in two of these instances litholapaxy had been previously performed; in my fourth and last case, the stone was very large; the following are the particulars :—

A young man, aged 18 years, was under my care in the Liverpool Royal Infirmary during the past summer. He was suffering from a large phosphatic stone in the bladder, which it was thought could be removed by litholapaxy. The patient being placed under ether, I found it impossible to grasp the stone with the lithotrite in such a way as to enable me to crush it, for, though I could seize it easily enough, the blades could not be approximated sufficiently to permit of my locking the instrument. I therefore proceeded with a perineal lithotrity, making my superficial incision as for lateral lithotomy. I opened the membranous urethra, and readily passed my finger on into the bladder, as for ordinary exploration. Finding the calculus to be fully as large as anticipated, a strong pair of forceps was introduced into the bladder, with which the stone was crushed and extracted. When the finger showed the bladder to be free, the latter was well washed out with a perchloride solution, and then a large drainage-tube was inserted. The tube was kept in for four days and then withdrawn; the patient was well and up on the eleventh day, passing all his urine by the urethra. Though the stone weighed about three ounces, it was broken up and evacuated in something under five minutes. In the other three cases referred to, a similar proceeding was practised. In one of these the stone was uric acid, the remaining two being phosphatic. In two the ordinary median boutonnière operation was practised, while in the third a preliminary lateral incision was made, as in the case narrated in detail.

So far as dilating the neck of the bladder was concerned, I have been able to accomplish this with my finger, aided sometimes by Wheelhouse's small gorget. I would wish, however, to draw attention more particularly to the forceps employed for crushing and evacuating the stone. In the specimen I am now showing, you will see that they consist of a strong pair of ordinary bladder forceps, with a cutting rib down the centre. They are sufficiently strong to break any stone which can be fairly grasped; they are, in fact, constructed on the same principle as the blades of a lithotrite, and are intended for use in the same manner.

Looking at the fragments of the stone removed from the young man whose case I have just related, it can be judged what these forceps are capable of doing, both in crushing and extracting. In this instance they enabled me to break up and remove a calculus in a few minutes, a process which I do not think could have been safely accomplished under half an hour by the ordinary lithotrite and water evacuation.

I hardly think I need apologise for bringing under your notice an operation which may, in some cases, be revived with considerable advantage. Circumstances are now very different to what they were twenty-five years ago, when perineal lithotrity had numerous advocates. Thompson had not then taught us the great value of digital exploration in diseases of the bladder; Otis had not demonstrated the full capacity of all parts of the male urethra to dilatation; Bigelow had not shown us the tolerance of the bladder to prolonged but gentle manipulations, nor had we learnt the value of drainage and irrigation of the bladder, and how much operative surgery was capable of doing for the enlarged prostate when this was found to complicate stone. In the presence of these advances, I believe that perineal litholapaxy will be found of considerable service, and that its more general employment will tend to reduce the number of stone recurrences after litholapaxy as usually practised.

These remarks will be read with interest by all surgeons. W. W. WAGSTAFFE.

PROF. MATTHIAS DUVAL, of the Paris Medical Faculty, has just published a quarto atlas of embryology. It contains forty double plates, with over five hundred figures, concerning the embryological evolution of the chick.

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* *Diseases of the Urinary Organs*, 1873.

ARTICLE 1254.

PIENIAZEK ON THE TREATMENT OF SUFFOCATIVE ATTACKS AFTER TRACHEOTOMY FOR CROUP.*

THE author has sought for some years to diminish the large mortality after tracheotomy, and used for some time, and with considerable success, an elastic catheter followed by aspiration. The catheter seemed to owe part of its success to its irritation of the tracheal walls, whereby a violent and effectual cough was set up. The method succeeded for the first or second severe attack, but, after that, as a rule, the stenosis reached the bronchi and it of course failed. In September 1882, he first tried another method upon a female child, aged 2 years. The patient being so young and the trachea consequently so small, but little benefit was likely to be derived from the catheter treatment; moreover its insertion might cause complete obstruction and suffocation. The author, after tracheotomy had been performed, remained within call, and when the first fit of suffocation (which was very severe) occurred, he removed the cannula and first attempted to aspirate through the catheter; but, as this did not succeed and the child's condition began to be critical, he introduced a pair of Schrötter's laryngeal forceps, with the blades placed antero-posteriorly so as to avoid catching hold of the trachea at its bifurcation, and succeeded in bringing out a knuckle of pseudo-membrane. Artificial respiration followed, and the patient soon breathed freely. During the next three days four other attacks were similarly and successfully treated; the membrane being first pushed down with the catheter and afterwards seized and removed with the forceps. One of these membranes was a complete cast of the lower part of the trachea with the three principal branches of the right and left bronchi.

The treatment of the sixth attack, however, failed. The removal of the membrane was followed by free vesicular breathing all over the right lung, but over the left nothing was audible. Two hours later the child died quietly, with symptoms, not of stenosis, but of collapse.

The next case was that of a boy, aged 7, in whom, twelve hours after tracheotomy, a violent suffocative attack occurred. The catheter and forceps were, however, successfully used. After that about four attacks took place daily, but these were treated before the symptoms became so acute, and often without the preliminary aspiration, as this was, as a rule, inadequate to remove the membrane. The attacks continued, but with diminished frequency, up to the third week, and the later ones were treated at once with the forceps; this instrument, instead of the catheter, being used to force down the membranes. Later still, it was found that the trachea was free, and that the obstruction was exclusively in the bronchi. The author then lightly curved the forceps, and by sense of touch, together with observation of the length and the direction of the curve of the instrument, succeeded in passing it into one or other bronchus. At the end of three weeks the attacks ceased, and at the end of five the child was removed.

In another case, that of a child 2 years old, there was a considerable degree of stenosis after the operation, and its seat was made out to be under the cannula. The author was anxious to see it, in order to determine its nature, and for this purpose, after several failures, he took a large ear speculum, pushed it into the wound, bent the patient's head as far back as possible, and pressed the head of the speculum towards the spine, so that the smaller end pointed to the bifurcation of the trachea. On throwing light from a reflector, the stenosed portion was plainly visible, and was seen to be due to growths upon the hinder and lateral walls; after failing to remove them blindly, a pair of laryngeal-polypus forceps was introduced through the speculum, and two of them were pinched off, the remainder being treated with the galvanic cautery. The operation was not easy, as the instrument shut out nearly all the view, but the difficulty of determining how deep to go was got over by measuring the distance first with a sound and marking it off on the forceps. The operation had, however, to be repeated more than once.

To reach the false membrane and dry masses in the bronchi and their principal divisions, Dr. Pieniazek has had an instrument like a very long blunt ear-spoon made. This was first used in a boy, aged 5 years, and though death appeared imminent he recovered. The spoon is of especial advantage in the case of the secondary bronchi, the walls of which are so thin that it is difficult to avoid seizing them with the forceps. The symptoms of stenosis in this situation were such as to be readily confounded with those of adynamia, for the breathing was superficial and there was no stridor; auscultation, however, always gave localised absence of vesicular murmur. During the year 1887 the author lost seven out of twenty tracheotomy cases—namely, two of erysipelas, two of adynamia, one of pneumonia, one of broncho-stenosis (which it was found impossible to relieve), and one was already dead in a suffocative attack when reached. In conclusion, the author enjoins that these methods should not be resorted to unless either danger is imminent or milder measures have failed.

RALPH W. LEFTWICH, M.D.

ARTICLE 1255.

MAPOTHER ON AN ANOMALOUS FORM OF ECZEMA.*

DR. MAPOTHER relates that he was consulted last January about a raw surface involving the right tragus, and the hairless skin in front of it, and was at once struck by its likeness to Paget's disease of the mammary areola. It was oval, about 1½ inch vertically and an inch transversely, florid and moist as is the glans penis during balanitis. The patient was a married woman of 40, long troubled with uterine maladies. Referring to his notes, he found records of two very similar cases, unilateral and in females, but of diverse ages—45 and 12. In the latter there was also a small patch a little above the eyebrow. The uniform, florid, oozing surface without granulations, hard and slightly raised, but without the rolled over edge of rodent ulcer, without pain or much itching, stubbornness to treatment, without occasional disappearance, characterised all the cases. Dr. Crocker has observed a like condition on the scrotum.

Dr. Mapother points out that some physiological analogies group these regions; in all, the sebaceous glands are very large; those round the nipple were, by Bidloo in 1685, described as supplementary mammary glands. The soakage of the skin by the overflow of milk or by the saliva of the infant may be prevented by their oily secretion, and in the scrotum and parotid region a similar waterproofing protection may be afforded against the urine and the sweat falling from the temple respectively. All agree as regions in which the arrival of puberty is manifested. In the female the scanty hair in front of the ear remains of the lanugo kind, and the glands are correspondingly large. The raw surfaces occasionally noticed round the lips, the nostrils, the eyelids, and round the anus are somewhat like, but they are rarely so chronic as Paget's disease, or the condition Dr. Mapother notes in the parotid region. All the cases healed, a slightly depressed unpigmented cicatrix remaining. Some forms of eczema undoubtedly leave scars, reaching well into the papillary layer. In 1879 Professor McCall Anderson saw with him a girl aged 4, who had somewhat similar raw eczematous patches on one cheek, and on the flexures of both knees and one elbow and ankle. The oozing was excessive, and did not cease for six years after, when rickets of the spine appeared, due probably to the saline flux. Pale, somewhat concave scars endure.

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* *Archiv für Kinderheilkunde*, Band x., Heft 1.

* Read in the Section of Pathology at the Annual Meeting of the British Medical Association held at Glasgow, August 1888. By E. D. Mapother, M.D., Ex-President R.C.S.I.; Consulting Surgeon to St. Vincent's and the Children's Hospitals, Dublin.

The writer mentions that Paget's disease of the mammary areola appears to be rare out of England; so say Scotch and American observers; and except a case which he observed in St. Vincent's Hospital, he can find no record of an instance in Dublin. His patient was an Englishwoman. It may be that there is a peculiar microbe which has not been freely imported, nor has found a fit soil. The curative effect of that greatest of parasiticides, mercury, in the cases here noted, supports that probability, as also does the apparent usefulness of exclusion of air. All forms of eczema on the face are obstinate, because of the unavoidable access of light and air. The earlier cases Dr. Mapother treated by an ointment containing carbolic acid, mercurial ointment, and vaseline; in the latest, that most valuable natural agent, lanolin, was employed as the vehicle; but in all, the surface being so limited, exclusion of air was attained by Seabury and Johnson's rubber plaster carefully adjusted.

Article 1256.

MELOTTI ON BERI-BERI AND INFECTIVE NEURITIS.*

Although Beri-beri is not a European disease, we occasionally meet with it in those who have returned from the East. In its geographical distribution it seems to be chiefly limited to the shores of the Indian Ocean, and especially the coast towns; but it also occurs in Brazil and in Panama. It is most common in China, the Malay Peninsula, and Japan, where it occurs about as frequently as enteric fever in this country. Though newly described in Europe it was studied by the Japanese doctors so far back as 1562. In recent times Simmons, in 1880, was the first to throw much light upon it. He showed that the disease was endemic and affected only those resident in the district. Its spread was favoured by damp weather. New comers are more liable to it than the old residents. It attacks usually men between 20 and 30 years of age, and one attack increases the susceptibility to the disease. The liability to it is much influenced by race, Europeans being extremely seldom attacked, though doing the same work and exposed to the same climatic influences as the natives. Chinese coolies are the most susceptible. It commences with excessive weakness of the lower extremities, so that the Japanese call it kak-ke, which means 'weak legs.' There are frequent intermissions, during which improvement appears to take place. The most interesting phenomenon, however, and one that is never wanting, is a certain degree of atrophy of different muscular groups, especially of the extensors of the legs. It usually begins with anæsthesia of the skin over the anterior tibial muscle, whence it extends to the ends of the toes. Sometimes it affects the interior of the mouth. The cutaneous anæsthesia is followed by wasting of the muscles beneath, leading to the position of the foot (pointing of the toes), so common in alcoholic neuritis. The reflexes are wanting, and the electrical excitability diminishes or disappears. To the muscular wasting succeeds great weakness of the heart, leading not unfrequently to fatal syncope. In other cases there is dropsy, either of the subcutaneous tissues or of the serous cavities. And, finally, the secretion of urine may be seriously diminished. In Japan the mortality varies between 5 and 22 per cent. It was at first thought that the muscular wasting was due to a form of myelitis, resembling Landry's paralysis. But it was shown by Scheube that the essential lesion was a multiple neuritis, which affects the small nerve-trunks more than the large ones, and especially the parts most distant from the cord; that is to say, the peripheral nerves. An affection of the pneumogastric explains the palpitation and the fatty degeneration of the heart, while a similar affection of the trophic and vaso-motor nerves explains the œdema and the dropsy.

Scheube's observations were at first received with much scepticism, chiefly on account of the scanty pathological evidence. But in 1884, having in the meantime gone to Java where the difficulties in getting *post mortems* were not so great, he amply confirmed his former observations. A Japanese, Ogata, in 1886, considered that he had found a bacterium, which could be artificially cultivated, and which in monkeys, dogs, and rabbits caused death with all the symptoms of Beri-beri, whether introduced into the blood or into the alimentary canal In 1887 Professor Pekelhäring, of Utrecht, was sen by the Dutch Government to study the disease in Java. He confirmed the observations of Scheube and eventually found the bacterium described by Ogata. He came to the conclusion that the poison was propagated in the food, and probably in rice, which is often gathered unripe, and undergoes changes somewhat resembling the ergot in rye.

The course of the disease, as well as its occurrence, almost exclusively in those living wholly or chiefly on rice, has suggested a comparison with Lathyrism, a disease met with in people subsisting principally on bread made from the lathyrus cicera or vetch. This disease was described by Duvernay in 1770, by Ramazzini in Italy in 1791, and a recent outbreak in Algeria in 1883 has been investigated and reported upon by Bouchard. It has also been described by Irving in India in 1857. Though paraplegia is the striking feature of Beri-beri and of lathyrism they have very little else in common. In the latter the paralysis is spastic and due to an affection of the pyramidal tracts, the reflexes are exaggerated, there is no muscular wasting, nor trophic disturbances.

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* *Gazz. deg. Ospitali*, October 1888.

The bacterial invasion of the peripheral nerves brings Beri-beri in close relation with the forms of paralysis occurring after diphtheria, enteric fever, puerperal fever, and small-pox; and with tetanus and rabies, which, there is good reason to believe, may be due to bacterial affections of the cord and medulla. H. Handford, M.D.

Article 1257.

GANGHOFNER ON CANCER OF THE UTERUS BEFORE PUBERTY.

Professor Friedrich Ganghofner, of Prague, has published an instructive paper in the *Zeitschrift für Heilkunde* (vol. ix., Parts 4 and 5, 1888) on a case of cancer of the uterus in a girl aged eight. He begins with a summary of previous writings on the subject. Soltmann (*Jahrbüch für Kinderheilkunde*, N. F., vol. xvi., p. 419) describes a case of cancer of the vaginal mucous membrane in a child aged two and a half, recording similar cases in even younger subjects. He believes that the disease is congenital. The earliest scientifically recorded case of primary carcinoma uteri in a woman under twenty years of age was described by Schauta (*Wiener med. Wochenschr.*, 1880, Nos. 37 and 38). A girl aged seventeen, in Späth's wards, suffered from hypogastric pains. A spherical mass, of the size of a walnut, sprang from the cervix. It was cut off, and the wound in the cervix cicatrised well. Small cancerous growths had repeatedly to be cut away from the portio vaginalis; at length a very massive deposit formed in the right parametrium, the supravaginal portion of the cervix remaining intact. The patient died seven months after the disease was first noticed. The tumour was a malignant adenoma of the cervix, hard to distinguish from carcinoma. Rosenstein (Virchow's *Archiv*, vol. xcii., p. 191) described a remarkable case of cancer of the fundus in a child not quite two years old. She had suffered from dysuria for three weeks. A tumour reached to the umbilicus. It became smaller after catheterism, but still extended three fingers' breadth above the symphysis. Its surface was nodulated; the inguinal glands were swollen. The child died a fortnight after she had been first examined. A tumour, projected from the right side of the fundus; a smaller growth, softening in the middle, sprang from the left side. The cervix, uterine mucous membrane, ovaries, and tubes were normal; small growths were found on the anterior surface of the bladder. The tumour was examined under the microscope. In parts it appeared truly cancerous, in others sarcomatous. Eckart (*Arch. für Gynäk.*, vol. xxx., 1887, part 3) describes a case where a large mass, presenting at the vulva of a girl aged 19, was found to spring from the cervix. The growth appeared microscopically to be sarcomatous rather than carcinomatous. Dr. Ganghofner's case entered a Vienna hospital on December 4, 1887. The patient was 8 years old. For two or three years blood had escaped from the vagina, and had been taken to signify precocious menstruation; but the flow was almost continuous. The child was fairly nourished. A lobulated tumour, the size of a hazel-nut and friable, sprang from the cervix anteriorly; its base, or area of insertion, was 'of the size of a twenty-kreutzer piece.' It was cut away with scissors, piece by piece; what could not be so removed was destroyed by the thermo-cautery. The anterior fornix and the rest of the vagina were intact. The unfortunate child's fate was very sad. When admitted on December 4 she was placed for two days in a ward with another child, who like herself was unvaccinated. The second child showed signs of variola on December 6. On December 14 Dr. Ganghofner operated on the case now being described. On December 17 the rash appeared, and the patient, who had otherwise fared well after the operation, died of confluent small-pox on Christmas Day. Professor Chiari examined the growth, and found that it was a medullary glandular carcinoma of the portio vaginalis uteri. No trace of the disease was left behind in the uterine tissue, nor were any lymphatics involved. Alban Doran.

SURGERY.

RECENT PAPERS.

1258. Ogston.—On the Treatment of Severe Compound Fracture and Dislocation. (*Medical Chronicle*, November 1888.)

1259. Guelpa, Dr.—On the Pathogeny and Treatment of Tetanus. (*Bull. Gén. de Thérap.*, Dec. 15, 1888.)

1260. Huchard, Dr. Henry.—On Sudden Death in Affections after Puncture of the Liver and Pancreas. (*Rev. Gén. de Clin. et de Thérap.*, November 1888.)

1261. Schulten.—On Extirpation of the Thymus Gland. (*Finska Läkaresällskapets Handlingar*, November 1888.)

Art. 1258. *Ogston on the Treatment of Severe Compound Fracture and Dislocation.*—In the *Medical Chronicle* for November, Dr. A. Ogston, of Aberdeen, details the results of recent personal experience in the mechanism and treatment of compound fracture and dislocation. It is pointed out in this paper that, besides the injuries necessarily present in a compound fracture, other concomitant lesions may occasionally be present, that alter the character of the case, such lesions constituting the chief source of danger, and requiring the most skilful treatment to prevent death, or, at least, great danger from septic disease. They are met with chiefly after machinery injuries, railway accidents, or injuries from being run over by road locomotives. In such injuries great and important alterations are found in the injured limb, to which, Dr. Ogston thinks, attention has not hitherto been specially drawn. These alterations are of two sorts. In the first place, when a limb has been rapidly and temporarily subjected to any great weight, the great and sudden force squeezes the liquids out of the compressed structures, and injects them into the neighbouring textures, especially the loosest parts, such as the subcutaneous spaces, intermuscular spaces, and the yielding tissue surrounding the vessels of the limb. Large quantities of blood are thus forced into the soft parts, and cavities are formed which extend for considerable distances, not only subcutaneously, but also between the muscles and around them and the bone, the connections between the various structures having been entirely or partially broken down. The centrifugal pressure of the blood, however, is not the only cause of these denudations, for they are to be found also in injuries more slowly produced, as, for example, when a limb has been slowly torn off by machinery, or when a very heavy body has rolled slowly over a limb. As the soft parts are drawn out by the force that crushes or tears off the limb, the different structures which yield to extension in variable degrees are separated from one another, and thus spaces of enormous extent are often opened up. Such spaces, as they are occupied by fluid prone to decompose, will occasion much danger, unless the septic changes, that are almost certain to occur in them, be anticipated and prevented, and it is of no little moment that the surgeon, when called to a bad compound injury, should be aware of the existence of these denudations, and investigate and treat them with the necessary energy and thoroughness. Chloroform or ether having been administered, the wound should be enlarged upwards and downwards, if necessary, and the disinfected finger employed to examine first the subcutaneous cavities, then those formed in the thickness of the limb, and lastly those around the ends of or between the bones. When the surgeon's finger is not long enough to explore all these cavities thoroughly, a long probe or other instrument should be employed. That which Dr. Ogston thinks is most serviceable is a steel calculus sound, with a short beak and a broad, flat handle. When this has reached the blind end of a long cavity the beak should be turned towards the surface so as to elevate the skin and the soft parts, which should then be divided by a scalpel, and the wound afterwards enlarged so that the finger can be introduced for further exploration. An opening for drainage and irrigation should, as a rule, be made at the furthest end of each cavity. The best instrument for drawing a drainage-tube through a long cavity is an ordinary lithotrite. After all the cavities have been thus treated, disinfecting fluid should be injected by a Higginson's syringe or an irrigator. The drainage and disinfection ensured by periodical irrigation in cases of bad compound fracture, render the course of such injuries almost as satisfactory and safe as that of a simple fracture. When the ends of the fragments of bone are soiled and contused, or fissured longitudinally, or cannot be replaced in apposition, they should be removed. As the subjects of compound fracture are usually strong and healthy persons, the bones are so dense that they cannot be divided as easily as those of weak or diseased persons. Hence, it is asserted, the saw is sometimes the worst instrument that can be selected for removal of the ends, which may be effected more quickly and easily by a mallet and sharp chisel. Enough of the bone should be removed to give entrance to the exploring finger, and to permit of free drainage and irrigation. Whilst advocating the free removal of the ends of the fragments in cases of bad compound fracture, Dr. Ogston points out that it is not necessary to remove the whole length of the bone that may be denuded of periosteum. It is held that all the measures that have been proposed for retaining the fragments in apposition by clamps, spikes, and metallic sutures, are not only unnecessary but dangerous. Division of the tendo Achillis, which has been often practised in cases of fracture of the leg with the same object, is held to be free from danger, and often of value. In conclusion Dr. Ogston states that in his opinion the treatment of gunshot wounds of bones and joints ought to be conducted on the above explained principles. In the limited number of cases that this surgeon has witnessed or treated, the greatest dangers, it is stated, have occurred when recourse had not been taken to them, while in those, on the other hand, which had been promptly subjected to thorough examination, drainage, disinfection, and removal of injured fragments or bone ends, the course had been almost that of common simple fracture in civil life. W. JOHNSON SMITH.

1259. *Guelpa on the Pathogeny and Treatment of Tetanus.*—As the result of a series of experimental observations on the nature and treatment of tetanus Dr. Guelpa concludes :—1. That tetanus is an infectious disease; 2, that although the horse is most liable to the disease, it is not of equine origin. The evidence points, though not conclusively, to a telluric origin, and in any case it is certainly due to the presence of microbes. 3. The symptoms are not due to the presence of the microbes *per se*, but to the poisonous effect of their secretions. 4. The first manifestations remain limited to the seat of injury (it is only in later stages, and even then very rarely, that the microbes invade the organism as a whole). 5. The treatment should be directed, *a*, to the destruction of the site of bacillary infection; *b*, to the elimination of the products of bacillary activity; *c*, to calming the nervous system. He attempts to fulfil the first indication by incisions and scraping and free removal of tissue, washing out the wounds with a 5 to 10 per 1,000 solution of corrosive sublimate, or preferably cauterising them with nitric or sulphuric acid. Elimination is favoured by stimulating the excretory organs—purgatives, diuretics, and diaphoretics, and giving chloral to procure rest.

1260. *Huchard on Sudden Death in Affections after Puncture of the Liver and Pancreas.*—The first case was that of a man, aged 56, with cancer of the bile-ducts, which ran a slow and insidious course. It ultimately invaded the pylorus when death occurred quite unexpectedly. Dr. Cénas attributes the suddenness of death in these cases to reflex irritation, taking its origin in the walls of the bile-ducts, but the heart was pale and flabby so that the fatal result may have been directly cardiac. The second case was one of cancer of the pancreas, in which death also occurred suddenly. The third case was one of hydatid cyst of the liver, and in this instance serious and prolonged syncope followed the use of a capillary trocar. Whatever the exact mechanism may be, Dr. Huchard insists upon the liability to syncope in superficial diseases of the liver; in fact, he is disposed to regard the liver as one of the 'syncopal areas,' akin to the epigastrium and the testicles. The effect may be intensified, and therefore fatal, when any concomitant disease or degeneration of the heart predisposes thereto. In some cases death would seem to be due to direct irritation of the semilunar ganglia. The moral is that even in such a simple operation as puncture of cyst of the liver the greatest prudence is necessary.

1261. *Schulten on Extirpation of the Thymus Gland.*—In the *Finska Läkaresällskapets Handlingar* for November 1888 are reported cases of partial extirpation of the gland for benign goître, made by Prof. Af. Schulten, at Helsingfors. The operation as practised in a series of cases extending from 1884-88 by different surgeons, had been invariably successful. Half the gland was removed in the three cases shown by Prof. Af. Schulten, and he recommended removal of the degenerated portion only. The author remarks that in Finland goître is for the most part sporadic. The cases so grave as to threaten life by suffocation by compressing the trachea are not common. But when there are dyspnœa and more or less difficulty in swallowing the necessity of operation is indicated. In these cases treatment with iodine was of no avail. The author recommends in the operation the passing of the drainage-tube behind the sterno-mastoid. In reviewing the various treatments he shows the much smaller proportion, 3 per cent., of deaths in partial excision than in total excision, in which the mortality was 15 per cent. In rapidly growing goître in young persons he recommends ligature of all the thyroid arteries as practised by Wölfler.

W. W. IRELAND, M.D.

MEDICINE.

RECENT PAPERS.

1262. RUNEBERG —On Tuberculosis from Contagion.

1263. OBTULOWICZ, DR. F.—On Diphtheria: its Etiology, Pathogenesis, and Treatment. (*Sprimon's Meditz. for* 1886, vol. ii., 1888, p. 708.)

1264. VASÏLÏEFF, DR. P. I.—On Infectiousness of Pulmonary Phthisis. (*Proceedings of the Kalüga Medical Society*, 1888, Part II., p. 14.)

1265. HAIG.—On Mental Depression and the Excretion of Uric Acid. (*Practitioner*, November 1888, p. 342.)

1266. LEIGHTON.—On a Case of Ruptured Diaphragm and Death by Apnœa. (*Gaillard's Med. Jour.*, October 1888, p. 319.)

1267. BAKER.—On the Causation of Cold Weather Diseases. (*Annual Report of the Michigan State Board of Health*, 1887.)

1268. RICHARDSON.—On Vertigo from Constipation. (*Asclepiad*, November 1888, p. 338.)

1269. HARLEY.—On the Extrusion of Gall-stones by Digital Manipulation. (*Illustrated Med. News*, October 1888, p. 73).

1270. HANDFORD.—On the Temperature-Pulse-Respiration Ratio in Health and Disease. (*Practitioner*, November 1888, p. 335.)

ART. 1262. *Runeberg on Tuberculosis from Contagion.*—At the meeting of the Finnish Medical Society, at Helsingfors, Sept. 22, Mr. Runeberg reported a case of tuberculosis undoubtedly caused by contagion. The patient was a peasant, 39 years of age, who had an untainted family history, and showed in his own constitution no tendency to phthisis. Two years ago he was in perfect health; but the symptoms appeared a little after the death of his wife from consumption. He had occupied the same bed and nursed her during an illness of several years.

W. W. IRELAND, M.D.

1263. *Obtulowicz on Diphtheria and its Treatment by Resorcin and Iodoform.*—Dr. F. Obtulowicz, of Buczacz, Austrian Galicia, says (*Sprimon's Meditz. for* 1886, vol. ii., 1888, p. 708) that in Galicia, during the period of 1878-82, as many as 79,950 persons died from diphtheria; the yearly average being therefore about 16,000. Taking 41·5 per cent. as an average mortality for diphtheria, about 40,000 persons are attacked by the disease every year. The affection is especially prevalent throughout East Galicia, where 'the population is poor and superstitious, and all sanitary conditions are consequently very bad.' The endemic attains its maximal intensity always about the late autumn season. Low and marshy districts seem to be its most favourite habitat. It is raging mainly amongst children, aged from 1 to 5; those between 5 and 10 years of age are attacked with comparatively less frequency; those aged from 10 and 15 but very rarely, while nurslings and adults fall ill with diphtheria only in exceptional cases. Both sexes appear to be affected equally; but an individual predisposition seemingly plays an important part, since when several persons come in contact with the diphtheritic virus simultaneously, and under equal conditions, some of them contract a severe, and others a mild, form of the infectious disease. As regards the treatment, Dr. Obtulowicz recommends—(*a*) disinfecting gargles, with 2 or 3 per cent. solution of boracic acid; (*b*) painting, by means of a brush, with a 10 per cent. solution of resorcin in earlier stages; (*c*) painting with an iodoform emulsion in the period of separation of false membranes; (*d*) internally—quinine, resorcin, Malaga and Tokay wine; (*e*) in presence of high fever, baths and packings. Basing his views on his personal experience, the writer strongly warns against any use of pilocarpine, chlorate of potassium, and 'generally all drugs apt to weaken the energy of cardiac contractions.' All diphtheritic patients are to be most strictly isolated.

1264. *Vasëlïeff on Infectiousness of Pulmonary Phthisis.*—Dr. P. I. Vasïlïeff, of Kalüga, relates (*Proceedings of the Kalüga Medical Society*, Part II., 1888, p. 14) a group of cases which are supposed to powerfully speak in favour of the contagiousness of pulmonary phthisis. The author happened to come to reside at a house belonging to a lady suffering from advanced consumption. His housekeeper, a previously strong and healthy woman, commenced to visit the sick landlady very frequently. In about two months the housekeeper began to suffer first from a progressive failure of her voice and subsequently from cough. A year later, when residing with an official's family, consisting only of the husband and wife, she died from phthisis. Shortly after her death the official's wife became affected with the same disease, to succumb within a couple of months. Almost simultaneously Dr. Vasïlïeff's girl, aged 11 months, died from pulmonary tuberculosis. During the illness the child was nursed by his wife's sister, a healthy young girl of 14. On her return to her parents' village the girl too developed all phthisical symptoms, ending in death in a few months. A thick cloth mantle belonging to her, on which she had usually lain during her illness, was given, after her death, to the family coachman, who converted the article into a kind of pillow to sleep on by nights. Within a month he began to suffer from hæmoptysis and all other phthisical symptoms, the disease rapidly ending in death. Finally, Dr. Vasïlïeff's wife, who had shown similar signs already during her little daughter's life, succumbed from consumption in a twelvemonth after the child's death. Dr. Vasïlïeff himself, however, remained well and sound all through, 'in spite of his having been living in a phthisical atmosphere for about six years.' He ascribes his good luck to his being an inveterate and assiduous tobacco-smoker (his average yearly dose of the weed being 36 lbs.). 'It is just possible,' he says, 'that the smoke, while somewhat irritating the oral and pharyngeal mucous membranes, promotes the neutralisation and elimination of the contagious principle of tubercular disease.'

Dr. M. S. Genkin, of Kalüga (*l.c.*, p. 15) similarly saw a case of transmission of consumption by a gentleman to his previously robust wife (a member of a healthy family), who was nursing him during his illness, and in whom tuberculous laryngitis was followed in three weeks by pulmonary symptoms with a rapid fatal course. Dr. Maria A. Panfilovitch, of Kalüga, also adduces a case where a phthisical gentleman conveyed the disease first to his child and then to his wife, all three succumbing one after another. V. IDELSON, M.D.

1265. *Haig on Mental Depression and the Excretion of Uric Acid.*—In the *Practitioner*, November 1888, p. 342, Dr. Haig contributes an interesting paper on the relation between the excretion of uric acid and mental depression. The author has published his researches on the relation of certain forms of headache to the excretion of uric acid (*Med. Chir. Trans.*, vol. lxx.), and he now shows that the mental condition of many patients depends on the amount of uric acid in the blood; when the acid is in excess it produces marked depression or irritability of temper, when this excess passes off there is a feeling of exaltation and sense of well-being. Many suffer from a certain amount of mental depression and heaviness at that time of the day at which the excretion of uric acid is normally at its greatest, that is in the morning between breakfast and lunch, during the time the acidity of the urine is lowest. This corresponds in every way to the condition artificially produced by giving alkalies, which wash uric acid in excess into the blood, so inducing depression; by giving acids sufficient to counteract the alkalinity of the blood, the heaviness and depression will give place to feelings of well-being, mental clearness, and pleasure in living. When the blood is strongly alkaline, and in a condition to hold much uric acid in solution, all the symptoms of mental depression are present, and are more or less marked according to the amount of acid present, the excretion of uric acid in the urine being at the same time proportionally in excess of the average. When a dose of mineral acid has been taken the mental conditions clear up exactly in proportion as the uric acid is cleared out of the blood, and its excretion in the urine diminishes. When a dose of acid has been taken to cure a headache or a fit of mental depression it is extremely common for some amount of shooting pain in the joints to be present while the acid is driving the uric acid out of the blood. By reducing suddenly the alkalinity of the blood in this manner, it is very common for the uric acid in the tissues of the joints to be deposited in the joints instead of passing off in the blood. In the treatment of cases of mental depression, where it is evident that the excretion of uric acid plays the chief part, it is not always certain that a dose of acid taken now and then will produce a cure; the prevention of the excessive formation must be aimed at by regulating the diet. A large amount of butcher's meat should not be allowed, but should be replaced by fish, fowl, and milk, and stimulants are to be avoided. In many severe cases the author has met with great success by insisting on a diet of bread, butter, milk, potatoes, and a large quantity of fruit, continued for weeks or months. At the beginning of this treatment the washing out of the uric acid stores may be hastened by giving about 15 grains of salicylate of sodium three or four times a day, or in some cases a dose to 20 grains every night is sufficient. This subject is worthy of continued study, and should commend itself to all medical men.

1266. *Leighton on a Case of Ruptured Diaphragm and Death by Apnœa.*—In *Gaillard's Med. Jour.*, October 1888, p. 319, Dr. Leighton records the following case: On March 4, 1866, he was called in haste to see a lady, aged 28, who was suffering from severe pain in the epigastrium, with severe dyspnœa and nausea. She had been in good health during the morning, and had eaten a hearty dinner two or three hours previously. Thinking the pain was due to undigested food, the author prepared a dose of ipecacuanha in water and directed her to swallow it; but she said she could not swallow. Thinking the taste prevented her swallowing, the author tried pure water, but this the patient could not swallow. Believing that the dyspnœa was due to gaseous distension of the stomach, and the dysphagia and other nervous manifestations to hysteria, the author left the patient, promising to return within half-an-hour. Within the half-hour the patient was dead, much to the astonishment and indignation of the friends. An examination of the body was agreed to after some delay, and on opening the thorax it was discovered that there was a large rent in the diaphragm on the left side, through which the stomach and spleen had entered the left thoracic cavity. The stomach was distended, filling the entire cavity except the spaces occupied by the spleen below and the left lung above, which was compressed into a mass about the size of a large orange. The edges of the ruptured muscle were thickened and rounded as if healed a long while before the fatal occurrence, and the rent was sufficient almost to admit one's hand. The husband stated that seven years previously his wife had a very severe labour, and that during the last few pains she 'felt something give way.' Since that time she had frequently suffered from attacks of colic and of indigestion with nausea, but was never able to vomit. No doubt the rupture occurred some years before death, but the stomach had never forced itself through the muscle before.

1267. *Baker on the Causation of Cold Weather Diseases.*—In *The Annual Report of the Michigan State Board of Health for* 1887, Dr. Baker publishes some interesting facts, mostly in the form of tables and diagrams, showing the close relationship which diphtheria, small-pox, and scarlet fever bear to atmospheric temperature. The conclusions arrived at are:—1. That diphtheria, scarlet fever, and small-pox increase after the atmosphere is cold and dry, and decrease after the atmosphere is warm and moist. 2. That these three diseases generally enter the body through the air-passages, and that the reason why they increase after the cold months is because of greater susceptibility of the air-passages in those months. 3. That the non-volatile salts of the blood exuded in excess into and upon the mucous surfaces of the air-passages are capable of leading to an inflammation which is called 'influenza,' 'tonsillitis,' or 'bronchitis,' according to the portion of the respiratory tract involved. 4. That, other things being equal, the non-volatile salts are left by evaporation on the mucous lining of the air-passages in proportion to the dryness of the air inhaled. 5. That certain kinds of diet, or non-action of the skin or kidneys may predispose to inflammation of the air-passages, and consequently to any communicable disease, which enters the body by way of the air-passages, to which the person may be susceptible. 6. That, aside from this cause (non-volatile salts), no other known cause capable of causing inflammation of the air-passages is 'present and acting' in proportion to the coldness and dryness of the atmosphere. 7. That, so far as is yet proved by statistics of large number of cases, the strongest controlling cause of inflammatory diseases of the air-passages is exposure to a cold dry atmosphere. 8. That, excepting inoculation and other similar exposure to the specific cause of the disease, the strongest controlling cause of the spread of those communicable diseases which generally enter the body through the air-passages is exposure in a cold dry atmosphere.

1268. *Richardson on Vertigo from Constipation.*—In the *Asclepiad*, November 1888, p. 338, Dr. Richardson observes that those who are accustomed to have a regular action of the bowels every morning are usually affected with vertigo, or a sense of faintness, if the natural habit be, by any accident, omitted. The reason of this is purely mechanical. The regular habit causes the rectum to be loaded with fæces, and, when such is the case, there is pressure on the surrounding veins, which at once interferes with the escape of the cerebro-spinal fluid through the inferior *vena cava* and the common iliac veins. This form of constipation must not be confounded with that due to accumulation or inaction of the colon; it is due to a loaded rectum, and is soon relieved by a brisk aloetic purge.

1269. *Harley on the Extrusion of Gall-stones by Digital Manipulation.*—In the *Illustrated Med. News*, October 1888, p. 73, Dr. George Harley describes and illustrates a method he has long practised of forcibly extruding any obstruction in the cystic and common bile-ducts, by means of a system of well-regulated digital manipulation through the intact abdominal parietes. In cases where there is any obstruction the gall-bladder is certain to be distended, and often it can be easily felt through the abdominal walls. When this is the case, gentle kneading with the fingers for ten or fifteen minutes will often relieve the patient's pain, and in a few hours a small gall-stone will be found in the stools. In this way the author has repeatedly cured patients who have been suffering from attacks of gall-stones or biliary sand for months or years. In cases also of renal calculi impacted in the ureters, he has often succeeded in forcing the calculus into the bladder by judiciously-regulated digital pressure along the course of the ureter. It requires a little practice before anyone new to this method can expect to be successful; but, after a time, those who give it a trial will be surprised to find the relief they can afford, and can verify the result by finding perhaps a stone as large as a bean in the stools.

1270. *Handford on the Temperature-Pulse-Respiration Ratio in Health and Disease.*—In the *Practitioner*, November 1888, p. 335, Dr. Handford draws attention to a chart he has designed, called the Graphic Clinical Chart, which has for its object the comparison of the pulse, temperature, and respiration at a glance. The standard adopted is a respiration rate of 16, pulse of 64, for a temperature of 98°·4 F., with an increase of 10 pulse-beats and 2½ respirations for every degree of temperature above the normal. For both sexes above the age of 40, and for stolid, apathetic, robust male adults of full average height, the scale is as nearly correct as possible. In cases of pyrexia without definite lesion or disablement of the heart or lungs, the pulse-respiration ratio has increased uniformly with the temperature, the three sets of lines on the chart rising and falling together with wonderful accuracy. When the temperature, however, falls below 98°·4 F., the pulse and respiration do not follow it but tend to rise. Beyond a temperature of 104° or 105° F., the pulse and respiration ratio is apt to prove incorrect, but even then most of the departures from the standard ratio have some definite significance. This is especially true in enteric fever at the height of the disease. In the beginning of the illness, for the first fortnight, the pulse-rate generally falls below the standard rate for the temperature. Again, in the middle of the illness, the degree to which the pulse rises above and out of proportion to the fever is one of the best indications of the seriousness of the case, and indicates cardiac failure. At the end of the third week the line representing the pulse-rate usually crosses the temperature line, and, as the latter falls, continues to remain above it, even into convalescence, and is due to cardiac debility, which takes some time to recover. A quickened respiratory ratio during the earlier part of enteric fever is a sure indication of lung mischief. These charts are most useful, and are easily understood by any competent nurse. They are printed and published by Wodderspoon & Co., 7 Serle Street, Lincoln's Inn, W.C.

Richard Neale, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1271. Sézary and Aune, Drs.—On the Treatment of Tuberculous Diarrhœa by Lactic Acid. (*Rev. Gén. de Clin. et de Thérap.*, November 1888.)

1272. Eloy, Dr.—On the Properties and Therapeutic Effects of the Phenacetines. (*Gaz. Hebdom.*, November 1888.)

1273. Daly, Dr. Edward O.—On the Hypodermic Use of Morphine.

1274. Egasse, M.—On the Nutritive, Anti-diabetic, and Laxative Properties of Soja. (*Rev. Gén. de Clin. et de Thérap.*, Dec. 20, 1888.)

1275. Huchard, Dr.—On the Treatment of Ascites by Faradisation of the Abdominal Parietes. (*Rev. Gén. de Clin. et de Thérap.*, Nov. 8, 1888)

1276. Hammond. — Iodised Glycerine. (*Rev. de Thérap.*, Dec. 15, 1888.)

1277. Procedure to Deprive Cascara Sagrada of its Bitter Taste.

1278. Boni's Blister.

1279. Pampoukis.—Mixture for Preventing Sea-sickness.

1280. Lanoline Cold Cream.

1281. Injection to Destroy Oxyuris Vermicularis.

1282. Dreschfeld, Dr.—On Pyrodine, a New Antipyretic. (*Med. Chronicle*, November 1888, p. 89.)

1283. Hailey.—On the Action of Antipyrin on the Vaso-motor System. (*Indian Med. Gazette*, September 1888, p. 260.)

1284. Treatment of Internal Hæmorrhoids by Injection. (*Illus. Med. News*, October 1888, p. 84.)

1285. Pulawski, Dr. A.—On the Treatment of Diphtheria by Iodoform. (*Gazeta Lekarska*, No. 36, 1888, p. 576.)

Art. 1271. *Sézary and Aune on the Treatment of Tuberculous Diarrhœa by Lactic Acid.*—A large number of tuberculous patients were subjected during several months to the lactic acid treatment with really remarkable results. Not a single case resisted the treatment, and the maximum duration of the diarrhœa was four days. To produce this effect the dose of lactic acid must be somewhat large. They commenced with half a drachm daily, gradually raised to two drachms. These doses occasionally give rise to heartburn and digestive troubles, but these are overcome by adding a few drops of chlorodyne to the mixture. They propose to carry out some further observations for the purpose of ascertaining whether these effects are due to the local action of the acid on the intestines, or whether it acts as a specific in tuberculosis.

1272. *Eloy on the Properties and Therapeutic Effects of the Phenacetines.*—The phenacetines are only slightly soluble, and cannot therefore be given hypodermically. Paracetphenacetine is, however, soluble in lactic acid, and is then well borne. Febrile temperatures are promptly lowered, but in some cases headache, cyanosis, suppression of urine, diarrhœa, and gastric troubles have followed their use. They are antithermic remedies of undoubted power, and are also analgesics and depressors of the kidney functions. Until they have been more extensively employed, it would be premature to affirm that they are devoid of the inconveniences which are alleged to have sometimes followed the use of antipyrin. The precise method of elimination has not been ascertained.

1273. *Daly on the Hypodermic Use of Morphine.*—Dr. Daly concludes a paper on the hypodermic use of morphine by the following recommendations:—1. Never inject a larger quantity than one-sixth of a grain in a person unaccustomed to morphine. 2. Never give an injection of morphine to a person suffering from hysteria. 3. Never give an injection to a person cured of the morphine craving. 4. Never hand over the syringe to the patient himself. He especially warns medical men against the habit of injecting themselves. That the practice is not uncommon (more particularly on the Continent) is shown by the fact that many cases of chronic morphinism are to be found among their number.

1274. *Egasse on the Nutritive, Anti-diabetic, and Laxative Properties of Soja.*—The *soja* is a plant growing in China and Japan belonging to the N.O. Leguminosæ. The seeds contain very little starch (3·2 per cent. as compared with 48 to 55 per cent. in beans, &c.), they are rich in fatty matter (27 to 35 per cent.), and the oil that is extracted possesses laxative properties in doses of from one-half to one fluid ounce. A bread made of the seeds is recommended in the dietary of diabetic patients, on account of the small proportion of starch they contain.

1275. *Huchard on the Treatment of Ascites by Faradisation of the Abdominal Parietes.*—The electrical treatment of ascites was suggested in 1861 by M. Tripier who had successfully treated serous effusions and hydrocele in particular, by this means. The method has since been largely put in practice. The current is applied by means of an electrode on the lumbar region, the other being brought into contact with the abdominal parietes in front. The effects are sometimes temporary, sometimes permanent. The latter may be obtained in simple chronic peritonitis (idiopathic peritonitis), and occasionally in tubercular peritonitis and in atrophic cirrhosis of the liver. In cirrhosis of the liver, the ascites may be due either to chronic inflammation of the peritoneum or to interference with the circulation. In the former case, a cure is possible by electricity, but in the latter, though temporary relief may be obtained, a permanent cure is manifestly impossible. The same remark applies to cardiac dropsy consequent on valvular disease. Electricity relieves the tension, but is evidently without effect on the lesion. When the amount of fluid is considerable, it is often preferable to precede the treatment by tapping, and subsequent compression of the abdomen should never be omitted. The effects are probably mechanical and due to the contraction of the abdominal muscles. Whatever the explanation Dr. Huchard claims to have obtained marked and lasting relief from electricity in certain cases of ascites.

1276. *Hammond on Iodised Glycerine.*—Dr. G. Hammond points out that a mixture of tincture of iodine and glycerine produces a greater effect on the skin than the pure tincture, possibly because the glycerine tends to prevent the evaporation of the iodine, and thus enables the whole of its powers to be utilised.

1277. *Procedure to Deprive Cascara Sagrada of its Bitter Taste.*—Two pounds of coarsely powdered Cascara bark is well mixed with an ounce of calcined magnesia, and a pint and a half of water. The paste is put aside to soak for twelve hours, and a pint and a half of alcohol, sp. gr. ·820, is poured over it in a percolator. When this has penetrated the mass a further quantity of alcohol, sp. gr. ·928, is added, and the whole is allowed to macerate for twenty-four hours. From this tincture a fluid extract may be prepared, which is devoid of the disagreeable bitterness of the drug, without any interference with its laxative properties.

1278. *Boni's Blister.*—Twenty parts of powdered camphor are melted with thirty parts of chloral hydrate, at a temperature of 60° C. To the liquid mass, ten parts of powdered cantharides are added and stirred up for an hour, the temperature not exceeding 70° C. It is then filtered. The blister may be applied with a brush or on a piece of lint.

1279. *Pampoukis's Mixture for Preventing Sea-Sickness.*—℞ Cocainæ mur., 5 grs.; spt. vini gallici, ℥ij.; syr. aurant. cort., ʒiv.; aqua, ℥j. Fiat mist. Take a teaspoonful every half an hour or oftener.

1280. *Lanoline Cold Cream.*—The *Archives de Pharmacie* gives the following formula.:—℞ Lanoline, 5 grammes; sweet oil of almonds, 5 grammes; precipitated sulphur, 5 grammes; oxide of zinc, 2·5 grammes; extract of violets, ·5 grammes; extract of orcanette, 9·5 grammes, to give rose colour.

1281. *Injection to Destroy Oxyuris Vermicularis.* The oxyuris vermicularis is said to promptly disappear with injections *per rectum* of cod-liver oil, pure or made into an emulsion with the yelk of an egg. It is non-irritating, and is said never to have failed to effect a cure. ALFRED S. GUBB.

1282. *Dreschfeld on Pyrodine, a New Antipyretic.*—In the *Med. Chronicle*, November 1888, p. 89, Dr. Dreschfeld contributes some clinical observations on pyrodine. It is a white crystalline powder, very sparingly soluble in cold water, has little taste, and has for its formula $C_6H_5N_2H_2$ (C_2H_3O). Doses of 8 to 12 grains given for several consecutive days to healthy persons produced no ill effects. The author then tried it in several cases of croupous pneumonia, and in all he found the temperature was quickly reduced. It was tried in twelve cases; in three there was no further rise of temperature after the first dose, in the other nine the reduction lasted over twelve hours. The dose varied from 4 grains in children to 12 grains in adults; in all it was well borne, without any unpleasant effects. The reduction of temperature was accompanied by profuse sweating. In two cases antipyrin and antifebrin had been tried without any good result. In scarlet fever, where the initial temperature was very high, it was found most beneficial, and in some severe cases of typhus one or two doses a day gave great comfort to the patient, diminishing the delirium, but it did not delay the crisis. When given to patients suffering from typhoid fever, it was found that its toxic effects showed themselves more readily in this disease than in any other, and after three or four doses it was apt to bring on jaundice and occasional sickness.

1283. *Hailey on the Action of Antipyrin on the Vaso-motor System.*—In the *Indian Med. Gazette*, Sept. 1888, p. 260, Surgeon Hailey draws attention to the power possessed by small doses of antipyrin given subcutaneously in controlling the excessive action of the skin, and more particularly the exhausting night-sweats of phthisis. When given in doses of one grain each night subcutaneously it acts in many cases in a marvellous manner, when all other drugs have failed. The author also relates a case illustrating the effect of local injections of antipyrin in acute superficial dermatitis of the forearm. A native was admitted into the hospital with acute superficial dermatitis of the forearm, extending over half the forearm on both anterior and posterior surfaces. The surface was dressed with zinc ointment for a week, but no improvement took place; then one grain of antipyrin was injected into the margin of the weeping surface twice daily. Next day a distinct improvement was noticed, and in two days the raw surface was beginning to scab over; in less than a week the whole surface was quite healed. Antipyrin no doubt has a powerful action on the vaso-motor nervous system, as the author suggests, by its action in the cases related by him; and those who are working with this drug might follow up these researches with much benefit to the profession.

1284. *The Treatment of Internal Hæmorrhoids by Injection.*—In the *Illustrated Med. News*, October 1888, p. 84, a leading article recommends the further trial of treating internal hæmorrhoids by injection. The best plan is to use strong carbolic acid, which is applied with an ordinary hypodermic syringe in the following manner:—The bowels having been thoroughly cleared out by an enema, and the hæmorrhoids well protruded, the patient is placed on his hands and knees, or directed to bend over a chair. From two to five minims of the carbolic acid are then injected slowly into the centre of each pile. After the injection has been made the hæmorrhoids swell rapidly, and it is desirable to return them within the sphincter as soon as possible, and the patient should be told to push up any portion which may subsequently protrude. The bowels should be kept quiet for twenty-four hours, and for the next few days gentle aperients should be used. If the rectum be examined with the finger a week or so afterwards, it will be found that there are indurated swellings corresponding to the points of injection; these shortly subside. Some observers direct that only one hæmorrhoid be treated at each sitting, but others prefer to inject all at one sitting. Sometimes a second injection is necessary after a fortnight; but it is seldom necessary to make more than two injections to cure a pile for many years. It is also useful to give an astringent ointment to be applied before and after the daily motion, for a few days. This treatment requires no anæsthetic, and enables the patient to go about his usual work at once, and is rarely followed by any complications. — Vide *Medical Digest and Appendix*, Sect. 896:2. RICHARD NEALE, M.D.

1285. *Pulawski on Iodoform in Diphtheria.*—In the Polish weekly *Gazeta Lekarska*, No. 36, 1888, p. 576, Dr. A. Pulawski, house physician to the Infant Jesus's Hospital in Warsaw, highly recommends, on the experience of seventeen cases, an external use of iodoform as the most effective, simple, easy, cheap, in short, the best possible treatment for diphtheria, especially convenient in poor and rural practice. He uses the drug either *per se*, or in a mixture with burnt magnesia, the powder being applied two or three times daily, either by means of a brush or an insufflator. A single dose of iodoform should vary from 5 to 10 grains. Even after a few doses the temperature sinks to the normal, while the mucous membranes affected become cleaner and healthier, the patient's swallowing becomes painless, the enlarged lymphatic glands decrease in size, and a steady and complete recovery rapidly ensues. To adduce a striking illustration. In a scarlatinal child of 4, there supervened diphtheritis of the tonsils, uvula, and soft palate, accompanied with an intense swelling of the submaxillary glands and extreme difficulty in breathing. Iodoform externally and ice internally were resorted to without delay. In forty-eight hours the temperature returned to the standard, and the morbid process was practically cut short. In a couple of days fluctuating abscesses on both sides of the neck appeared, and were at once opened. A few days more, and the child was found well and sound. A complete recovery followed almost as rapidly in another case—a boy of 8—with tonsillary, faucial, and buccal diphtheria, complicated with severe cerebral symptoms. Dr. Pulawski does not entertain any doubt that the curative action of iodoform is due to powerful antiseptic effects of iodine liberated by the chemical compound. He never saw any untoward symptoms following a liberal use of iodoform. [Iodoform was successfully used in diphtheria also by Drs. Sher (the LONDON MEDICAL RECORD, April 1883, p. 146), Shirres (*ibid.*, May 1887, p. 213), Richmond (*Lancet*, vol. ii., 1886, p. 400), &c.—*Rep.*] V. IDELSON, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1286. VIGNARD, DR.—Intra-parietal Sarcoma of the Uterus. (*Nouvelles Archives d'Obstétrique et de Gynécologie*, August 1888.)

1287. HALL, RUFUS B.—A Plea for Early Operative Interference in Cases of Obscure Pelvic Pain and Recurrent Attacks of Pelvic Inflammation in Women. (*Jour. American Med. Association*, Sep^{t}. 15, 1888.)

1288. SHALITA, DR. SEMEN G.—Artificial Vagina with Grafting of Mucous Membrane. (*Vratch*, No. 36, 1888, p. 705.)

1289. SAVELÏEFF, DR. M. V.—Case of Cæsarean Section. (*Meditz. Bĕsĕda*, No. 17, 1888, p. 470.)

1290. **Grammatïkatï, Dr. Ivan I.**—Five Cases of Ovariotomy. (*Vratch*, Nos. 19 and 20, 1888, pp. 362 and 390.)

1291. **Krïvolützky, Dr. Vladimïr I.**—Case of Labour complicated with Myoma of the Uterine Cervix. (*Proceedings of the Orel Medical Society for* 1887, p. 11)

1292. **Stroynowski, Dr.**—On the Use of Massage after Thure-Brandt's Method in Total Prolapsus of the Womb. (*Wiadomosci Lekarskie*, July 1888, p. 32.)

1293. **Byford, Dr.**—Twelve Months of Abdominal and Vaginal Surgery. (*Obstet. Gazette*, November 1888.)

1294. **Terrillon, Dr.**—A Fourth Series of Thirty-five Ovariotomies. (*Bull. Gén. de Thérap.*, Dec. 30, 1888.)

1295. **Prewitt, Dr.**—On a Case of Ovarian Tumour Complicating Pregnancy. (*Obstet. Gaz.*, November 1888.)

1296. **Price, Dr.**—On a Case of Ruptured Pyosalpinx. (*Obstet. Gazette*, November 1888)

1297. **Champetier de Ribes, Dr.**—On a Method of Inducing Premature Labour by Dilatation of the Genital Canal. (*Annales de Gyn.*, December 1888.)

1298. **Varnier, Dr. H.**—On a Case of Peripheral Facial Paralysis in a New-born Infant. (*Annales de Gyn. et d'Obst.*, November 1888.)

1299. **Verneuil, Dr.**—On Partial *versus* Total Amputation of the Uterus.

1300. **Terrier, Dr.**—On Hysterectomy in the Treatment of Uterine Cancer. (*Rev. Gén. de Clin. et de Thérap.*' Nov. 8, 1888.)

ART. 1286. *Vignard on a Case of Sarcoma of the Uterus.*—A report of this case was read in June before the Société Anatomique de Paris. The patient was a stout widow, aged 47, married at 20, but she had never been pregnant. The menopause had occurred four years previously. Blood began to flow in March 1887, and continued, with intermissions, till admission into the Salpêtrière on March 11, 1888. The blood was dark; sometimes fluid, sometimes in clots. Pain had been felt above the pubes and in the right groin, especially before the escape of blood. Micturition was frequent for the last two months, and anorexia had then come on. The patient's mother died, aged 46, of a tumour below the jaw. A tuberous growth could be felt in the abdomen, rising four fingers' breadth above the umbilicus, and extending much more towards the right than the left flank. Below, it was tender to touch. The cervix was effaced, and very high in the pelvis; in front of it lay a tender, round mass, continuous with the abdominal tumour, which was fairly movable. The sound passed nearly six inches into the uterine cavity. On June 2 M. Terrillon ligatured the broad ligaments, securing the uterus as near the cervix as possible by an elastic ligature and a stout silk thread. The pedicle thus made was cut through, cauterised, and left free in the abdominal cavity. On the eighteenth day, when the report was read, the patient was doing well. The tuberosities on the tumour were caused by numerous interstitial myomata in the anterior wall. The fundus and posterior wall were occupied by a large, soft homogeneous tumour. At only one point did it touch the uterine mucous membrane, elsewhere it was separated from the latter by an inch or more of muscular tissue. The tumour almost touched the peritoneal coat of the uterus towards the right, where great pain had been felt. Messrs. Cornil and Gombault examined sections of the tumour, which was a mixed sarcoma. Many of the cells were undergoing kariokynesis. Towards the peritoneal aspect, the limit between the muscular fibres of the uterine wall and the sarcoma was very sharply indicated. Towards the uterine cavity the transition was gradual, smooth muscle-cells being blended with sarcoma tissue. Spindle-cells were less abundant than round and polygonal cells in this tumour. Dr. Vignard stated that in 1872 a uterine sarcoma, secondary to sarcoma of the brain, had been exhibited before the Society; in 1881 a sarcoma of the uterus, involving the fundus and posterior wall, and sparing the uterine mucous membrane, was exhibited; it was almost a *fac-simile* of Dr. Vignard's specimen. In 1881 M. Terrier described a case of sarcoma of the fundus, including a blood-cyst; two small uterine sarcomata recently were examined by M. Cornil; they came from M. Polaillon's wards. The Germans have described more instances of the disease. In 1887 Dr. Martin noted two cases; one was an intra-ligamentary myosarcoma; the other a mixed sarcoma, which had penetrated into the uterine cavity and protruded into the vagina. A case like the latter occurred in Berlin during the same year, together with another example of uterine sarcoma, the two being described as myomata degenerated into sarcoma; but German histologists appear to trace all sarcomata of the uterine parenchyma to degeneration of myomata, and hence call them fibroid sarcomata. [In association with this subject, note must be made of Dr. Pernice's remarkable myosarcoma striocellulare uteri (Virchow's *Archiv*, vol. cxiii., Part I., p. 46), which forms a racemose mass like a hydatid chorion, is largely made up of cells resembling fœtal striated muscular tissue, and is exceedingly malignant.—*Rep.*]

1287. *Hall on Early Oöphorectomy for Diseases of the Appendages.*—Dr. Rufus Hall read a paper at the thirty-ninth annual meeting of the American Medical Association, May 1888, in which he extolled the principles of Mr. Lawson Tait, and maintained the importance of removing the uterine appendages in cases of obscure pelvic pain and recurrent attacks of pelvic inflammation, as soon as the disease proved to be evidently incurable by milder means. To objections about difficulty of diagnosis, Dr. Hall replied that the clinical and physical characters of chronic tubal disease were now well known. The unsexing of women as the result of oöphorectomy was a myth, for after removal of both ovaries for any cause the patient did not grow a beard nor acquire a masculine voice. Coitus was more, and not less tolerable after the operation, the presence of the diseased parts causing great pain during connection. The class of disease in question endangered life. Oöphorectomy was, no doubt, very difficult in many cases, owing to deep adhesions, yet by careful manipulation and proper drainage when there was much oozing a greater percentage of the cases recovered than after operations for large cystic tumours (*sic*, Dr. Hall means, no doubt, operations where extensive adhesions or other severe complications exist). Leading authorities in London and, later, in America, once opposed operations for pelvic inflammation, not knowing the frequency of tubal disease as proved by the pathological researches of Drs. Kingston Fowler, and Lewers. [Dr. Hall quoted, apparently second-hand, Dr. Lewers' valuable paper 'On the Frequency of Pathological Conditions of the Fallopian Tubes' (*Trans. Obstet. Soc.*, vol. xxix.). In the instructive discussion which followed, and is published in full, Dr. Matthews Duncan pointed out that Dr. Lewers' dead-house cases were above forty on an average, and many quite old; Dr. William Duncan also showed that almost all died from diseases not attributable to the tubal mischief.—*Rep.*] After relating two cases, Dr. Rufus Hall concluded that chronic disease of the appendages called for surgical relief, for a tube distended by pus could be cured by no other means. The operation should not be postponed year after year, or till the patient is exhausted from constant pain, and in danger of a fatal termination from complications that will sooner or later surely (?) come. Dr. Hall believed that an operation for removal of the diseased appendages should be advised when constant care and treatment for a period ranging from twelve to eighteen months is not followed by more than temporary relief. [With this qualification about prolonged watching of each case, Dr. Hall's principles are certainly justifiable. If he overrates the frequency of serious disease of the appendages, he, on the other hand, rightly takes pains to remind the operator that oöphorectomy is difficult. The idea that it is easier than ovariotomy is a dangerous fallacy.—*Rep.*]

1288. *Shalīta on Vaginoplastics with Grafting of Mucous Membrane.*—In the *Vratch*, No. 36, 1888, p. 705, Dr. Semen G. Shalīta, house-surgeon to the Hebrew Hospital, Kīev, publishes the following unique and brilliant case. In June 1887, a well-made and well-nourished girl, aged 16, sought his advice on account of a rapidly increasing enlargement of her abdomen. The patient stated that she had never menstruated. On examination, there was found a distinctly fluctuating, fairly movable, ovoid or rather pear-shaped tumour of the size of a child's head, situated in the pelvis and hypogastric region. The pubic hair-growth was rather scanty, and the minor labia undersized, while the vagina was represented only by a blind sac 1½ centimètres long. A combined exploration showed that the abdominal tumour stood fairly high above the top of the *cul-de-sac.* A hæmatometra depending upon a congenital malformation of the vagina was diagnosed, and a vaginoplastic operation performed (by Dr. Shalīta assisted by Dr. A. S. Iatzenko) under chloroform and antiseptic precautions. Having introduced a catheter into the bladder and his left forefinger into the rectum, Dr. Shalīta made an incision into the top of the vaginal sac to reach the pelvic tumour, at the depth of 9 centimètres, through tearing the cellular tissue between the bladder and rectum partly with his fingers, partly by means of some blunt instruments. The tumour having been tapped, about a tumblerful of dark, thick blood escaped. A subsequent enlargement of the puncture gave issue to two more tumblerfuls of the fluid. Having inserted an iodoform gauze plug into the uterine incision, the author dilated the vaginal tract with his forefingers and introduced a big and long tampon. The evening temperature twice rose to 39° C., but otherwise the aftercourse was quite satisfactory. A continuous dilatation by means of tampons, bougies (No. 12), and fingers was kept up for ten weeks, after which the girl was discharged with the recommendation to insert the bougie for two hours every day. About three and a half months after the operation, she returned with all former complaints, including a considerable abdominal swelling, her artificial vagina having been completely obliterated. Another plastic operation of the same kind was performed on Oct. 28. Notwithstanding assiduous procedures of dilatation, a gradual contraction of the parts set in again. To prevent an inevitable recurrence of the obliteration, Dr. Shalīta resolved to furnish the vaginal tract with a mucous integument, by means of grafting. Accordingly, on Dec. 28, he excised (with scissors), from the internal surface of the girl's genital labia, five pieces of the mucous membrane, measuring each ½ to 1 centimètre × 3 or 4 millimètres, and then, having slightly refreshed the granulating surface with a sharp spoon, carefully placed the grafts, at the distance of from 2 to 5 centimètres, one from another, on the posterior and anterior walls of the tract. To keep the grafts *in situ*, he introduced a thick iodoform gauze plug containing a very elastic and voluminous drainage-tube surrounded with tightly-fitting cotton-wool globules. For four days the girl was kept as motionless as possible, her urine being drawn out by catheterisation, her bowels immobilised by means of opium. On the 5th day, 4 mucous grafts were found firmly adherent. A slowly, but steadily spreading growth of all the four grafts commenced to proceed towards the end desired. On re-examination of the girl in August 1888, the entire artificially made vagina, 10 centimètres long, and as wide as a multipara's vaginal tract, was found beautifully lined with a somewhat palish, but otherwise quite normal mucous membrane. Dr. Shalīta does not entertain any doubt whatever that no obliteration, and even no contraction, can possibly take place henceforward. The catamenia recur quite regularly once monthly. [In a friendly letter to the RECORDER'S reporter, dated Oct. 17, Dr. Shalīta adds that to elucidate the matter still further he has recently excised two pieces of the newly-formed mucous membrane and handed them over, for a microscopical examination to the distinguished histologist, Professor V. V. Podvysotzky, of Kīev. One of the pieces, which had been excised just above the former *cul-de-sac*, presented numerous papillæ with many layers of richly growing epithelial cells; in short, the piece's structure proved to be histologically identical with that of an ordinary mucous membrâne. The other piece, removed from the vicinity of the vaginal portion of the womb, similarly showed an abundant proliferation of the epithelial elements, but the papillæ were nearly absent. This universal presence of the epithelial lining completely justifies Dr. Shalīta's hope that the newly-formed vaginal tract will remain permanently open and will preserve the dimensions that have been secured by the operation in December 1887. Dr. Shalīta draws attention to the fact that he has been the first to perform a vaginoplastic operation combined with grafting mucous membrane. Professor Woelfler undertook his remarkable experiments (*vide* the *Beiträge zum Centralblatt für Chirurgie*, No. 24, 1888) somewhat later.—*Rep.*]

1289. *Savelïeff on a Case of Cæsarean Section.*—In the *Meditz. Bĕsĕda*, No. 17, 1888, p. 470, Dr. M. V. Savelïeff, of Zemlansk, details the case of an under-sized peasant primipara, with an extremely narrowed pelvis (the conjugata externa = 14 centimètres; diameter intertrochant = 24; diam. inter. spin. ant. sup. il. = 20), to whom he was called on the third day of labour, to find a dead fœtus lying transversely with its left arm prolapsed. Cæsarean section was at once proposed, and readily accepted. The operation was carried out by the author, with two assistants, in a wretched peasant hut, on a common deal table (washed over with a sublimate-corrosive solution and covered with the patient's paillasse), about midnight. The woman being well under the influence of chloroform, the abdominal cavity was opened by a single median incision, 22 centimètres long, penetrating through all layers, including the peritoneum. Then the womb was split up along the median line by an incision measuring 18 centimètres in length. Bleeding was quite inconsiderable. The fœtus, with placenta, having been extracted, the uterine and peritoneal cavities were washed out with a boracic solution, and the wound freely powdered with iodoform and closed, the uterine one with nine sutures, the abdominal with nine peritoneal and eighteen cutaneous ones, after which an antiseptic dressing was applied, and Mikulicz's iodoform gauze plug inserted into the vagina. The operation lasted fifty-five minutes. The woman bore it in the best way possible, the temperature never rising above 37°·7 C. On the fifth day, the medical assistant on duty having left the patient's room for a moment, the woman (who felt sure that she was already quite well) hurriedly got up and ran to the stove to extract therefrom a heavy family pot filled with *kasha* (thick buckwheat gruel). Several hours later the temperature rose to 38°·4 C., and pulse to 102 per minute, while there appeared hiccough, almost incessant vomiting, abdominal distension, and delirium. On examination, the dressing was found disarranged, the abdomen enormously enlarged and tense, the lower angle of the abdominal wound widely gaping. On the sixth day after the operation, and sixteen hours after the unlucky woman's foolish act, she died, with all the symptoms of fulminant peritonitis.

1290. *Grammatīkatī on Five Ovariotomies.*—In the *Vratch*, Nos. 19 and 20, 1888, pp. 362 and 390, Dr. Ivan I. Grammatīkatī, of Saratov, details five successive ovariotomies performed by him at the local Zemsky Hospital (without any special arrangements) during 1887. The cases refer to married women, aged from 22 to 37, in one of whom colloid proliferating cystoma of the right ovary, with a broad vascular pedicle, was present; in another, dermoid cyst of the right ovary, with perimetritis of the left broad ligament, connected with cystic degeneration of the corresponding ovary; in a third, cystoma of the right ovary, with twisting of the pedicle, intracystic hæmorrhage and pericystic peritonitis; and in the remaining two, cysts of the right broad ligament, with enlarged corresponding ovary, were found and removed. The operation, conducted under usual antiseptic precautions, lasted from forty-five to ninety minutes. The abdominal incision was invariably carried along the median line from the navel to the pubes; the pedicle was treated after the intraperitoneal method (ligated); no drainage was used, only a careful peritoneal toilette performed. In three of the cases no febrile movements occurred, in the other two the evening temperature rose to 38° C. for the first four or six days. All the patients were discharged quite well in about three weeks. Dr. Grammatīkatī dwells mainly on the following points as illustrated by his cases:—1. *Perimetritis of the Broad Ligament.*—In a majority of cases one-sided ligamentary perimetritis begins as perisalpingitis caused by some disease of the oviduct. Less frequently it commences as perioöphoritis caused by cystic degeneration or other primary lesions of the ovary. In one of the writer's cases there existed perimetritis of the ovarian variety, which could be correctly diagnosed before the operation. For a differential diagnosis, the author says, it is important to consider the size and configuration of the nucleus, which is detected in the centre of a perimetritic tumour. Relatively large size, roundish shape, equal density and proximity of the nucleus to the vaginal fornix point to an ovarian perimetritis, while a relatively high position, an oblong shape, as if lobulated surface and a rather softish consistence, speak for a salpingitic origin of a ligamentary perimetritis. 2. *Twisting of the pedicle*, complicating one of the cases (referring to a patient of 37, with six deliveries, and an originally freely movable multilocular cystoma of two years' standing), was caused by the woman's stumbling during a walk, the predisposing moments being an unequal growth of different portions of the tumour (one half had been growing by far more rapidly than the other), and a flabby condition of the abdominal press. Though there were present all characteristic signs of the twisting, such as peritonitis, a sudden increase of the tumour, &c., the diagnosis before the operation oscillated between a twisting and a rupture of the cyst, since a careful examination was very difficult on account of an excessive abdominal tenderness. The operation was performed, though after a preparatory treatment of two months' duration, still in the presence of intense peritonitis with fever. The tumour was found to be extensively matted with the anterior abdominal wall, omentum, bowels, and bladder. The patient, however, made an excellent recovery, the highest temperature being 37°·9 C. on the first evening. 3. *Cysts of the Broad Ligament.*—Dr. Grammatīkatī differs from the opinion in vogue that ligamentary cysts occur comparatively seldom, grow but slowly, and are not associated with any severe clinical symptoms. In one of his two cases of the kind, the cyst (in a lady of 30, with three deliveries, the last one and a half year after the appearance of the tumour) increased in size from a fist to an eight-month pregnant womb in the course of three years. In the other patient (a burgess of 25, with six deliveries, the last a twelvemonth before the operation), the tumour reached the size of an infant's head during the same period. In both intense pain was present, while in one the whole train of clinical symptoms was so severe that the author, following the said usual teachings, was induced to diagnose a dermoid cyst of the ovary before the operation.

1291. *Krivolützky on a Case of Labour complicated with Fibromyoma of the Uterine Cervix.*—Dr. Vladimīr I. Krīvolützky, of Orel, relates (*Proceedings of the Orel Medical Society for* 1887, p. 11) the following curious and rare case. He was called to a puerperal peasant woman, respecting whom he was told, 'her whole inside had fallen out just after the expulsion of the child and placenta' two days before. The patient was found to be extremely weak, and suffering from high fever. Between her thighs there was lying an offensive tumour as large as a child's head. The tumour proved to be the lower portion of the womb, with a fibromyoma of the size of a big apple embedded amidst the cervical tissues. From the *os uteri* there was protruding a by far still larger tumour, a hæmatoma which had originated undoubtedly from rupture of the myoma's fibrous capsule during the labour. Having applied a ligature on the base of the blood-cyst, Dr. Krīvolützky cut it away with a scalpel, washed out the wound, covered the latter with iodoform gauze, and ordered the patient to be removed to the Zemsky Hospital. In course of time the fibroid sloughed away. The patient made a good recovery.

1292. *Stroynowski on Massage in Total Prolapsus of the Womb.*—At the fifth general meeting of Polish medical practitioners and naturalists at Lvov (Austria), Dr. Stroynowski of Lvov, read (*Wiadomosci Lekarskie*, July 1888, p. 32) an interesting paper on the treatment of prolapsus of the uterus by massage, as recommended first by Dr. Thure-Brandt (of Sweden). The latter had tried the method first in a soldier suffering from prolapsus of the rectum. The patient was cured. Being encouraged by his success, Dr. Thure-Brandt commenced to apply massage in various female genital affections, including total prolapsus of the womb (as well as peri-uterine and peri-ovarian inflammatory effusions, &c.). According to Dr. Stroynowski, the method can be resorted to only in uncomplicated cases; in particular, it is contra-indicated in presence of pregnancy, tenderness of the parts concerned, suppurative salpingitis, &c. In technical regard the treatment consists in manipulations of the following three kinds:—1. *Tapotement* of the lumbar vertebræ, which is thought to exercise some beneficial influence on the pelvic circulation of blood and lymph. 2. The so-called *lyftingen*, or 'lifting up' the prolapsed womb. The operator pushes the organ upwards through the vagina and brings it in an anteverted position, while his assistant lifts up the womb through the abdominal integuments. 3. *Stroking* the adductors, which 'is performed in such a way that each movement of the operator's hand strives to overcome the resistance of the muscles contracted.' Under the influence of those manipulations (repeated at each sitting) the vagina and pelvic floor are said to regain their elasticity and strength, while the uterus decreases in size and weight and gradually ceases to gravitate downwards. Dr. Stroynowski mentions two cases of his permanently cured by the method in a couple of months. In the course of a discussion which followed the communication, Dr. Gulinski, of Warsaw, expressed his fears that 'the manipulations were apt to give rise to erotic sensations both in the patient and operator.' In reply, Dr. Stroynowski assured Dr. Gulinski that the method was entirely free from drawbacks of the sort.

V. IDELSON, M.D.

1293. *Byford on Twelve Months of Abdominal and Vaginal Surgery.*—Forty-eight cases were tabulated, twenty-seven abdominal sections and twenty-one vaginal sections, with a mortality at the rate of 17 per cent. Although the abdominal cavity was always opened in the cases of vaginal section, all of the deaths occurred in the abdominal sections. Two were from hæmorrhage, three from exhaustion, one from obstruction of the bowels, and one from heart failure. The deaths from hæmorrhage were ascribed to the author's faithfulness in following out the teachings of the acknowledged authorities. The recommendation, almost always given, to tie the pedicle in halves and to transfix it at a non-vascular place, makes the point of transfixion in most cases a weak one, from which the ligature is apt to tear out. A safer method was described in which the pedicle is transfixed in two places by one thrust of the needle. The death from heart failure might possibly have been prevented by a liberal use of stimulants. Stimulants are recommended for all cases of feeble circulation or bad nutrition after the first two or three days, to be given between the hours of 2 and 8 A.M. In preparing the patient, he prefers as a laxative six grains of blue mass followed by a saline and a glycerine enema. After the operation he prefers salines. No morphine is used in the after-treatment, pain being treated by aromatics, the rectal tube, and glycerine and water enemata. The attainment of absolute asepsis he considered impossible, and, moreover, not always necessary in order to obtain good results.

1294. *Terrillon on a Fourth Series of Thirty-five Ovariotomies.*—The operations belonging to this fourth series comprised thirty-five ovariotomies, of which only three proved fatal. Two of the deaths were due to shock and the third to exhaustion. In none of the cases was there the slightest symptom of peritonitis or septicæmia. In only six cases was the tumour without adhesions, and sixteen of them presented numerous difficulties. In all, there have been 17 deaths on 130 cases, equal to a mortality of 11 per cent.

1295. *Prewitt on a Case of Ovarian Tumour Complicating Pregnancy.*—Dr. Prewitt was called to a case of five months' pregnancy in which the uterus was pushed up out of the pelvis so that the cervix was hardly accessible. The tumour felt hard, and he was unable to diagnose either its nature or its attachments. As it did not appear possible for delivery to take place with the tumour *in situ* he determined to perform an exploratory laparotomy. Before doing so he made several attempts to get the tumour out of the way, but failed. During the last examination, however, he felt something give way, and soon afterwards the patient had nausea and vomited. On the following day he operated and found an ovarian tumour down in the pelvis and a quantity of fluid in the pelvic cavity. He dragged the tumour out and removed it, and cleaned out the cavity as best he could. The patient made a rapid recovery. He found that he had pushed his finger through the wall of the tumour.

1296. *Price on a Case of Ruptured Pyosalpinx.*—On Sept. 6 Dr. Price was called to a woman with symptoms of miscarriage, but an examination was declined on the ground that the patient was not and could not be pregnant, menstruation having been regular. On the 10th there was still much pain and extremely offensive discharge, with fever and shivering. On an examination which was no longer refused, the uterus was found about four inches in depth, with part of a rotten placenta adherent to its right posterior wall. The uterus was in good position and perfectly movable, with both tubes enlarged and thickened, and at this time could not have been adherent to any surrounding structures. He removed the placenta with considerable difficulty. He used hot water irrigation with boracic acid, and some relief was experienced. The tubes, however, continued to enlarge, and an operation was urgently advised, but consent could not be obtained. Matters continued to get worse until the 20th, when an operation was agreed upon, and on the 21st abdominal section was performed. He found the internal organs matted together, uterus much enlarged, both tubes enlarged and ruptured, adherent to everything they touched, pelvis full of pus cavities, almost up to the kidneys on both sides; everything in a semi-gangrenous condition. There was little bleeding from ruptured adhesions or from wound in opening abdomen, which is never a good indication. A great quantity of pus was evacuated—at least two pints—of the most offensive character. Irrigation and drainage were used. The patient was a very large woman, consequently the longest drainage-tube that could be found was used. She rallied from the ether, and for the first six hours there was discharged from the drainage-tube two pints of very offensive serum. It gradually lessened in quantity, but increased in offensive character. A cleaning of the tube was made every half hour; after cleaning, warm boracic water was injected through the tube. It improved matters only for the moment. Patient died twelve hours after operation.

1297. *Champetier de Ribes on a Method of Inducing Premature Labour by Dilatation of the Genital Canal.*—The apparatus consists of a conical bag made of silk and caoutchouc. Its greatest circumference is 32 centimètres, and it is 11 centimètres in length. The bag is anointed with vaseline and introduced by the aid of forceps, passing well beyond the cervix. It is then filled with fluid. Labour pains are soon excited, and as the bag is expelled, it dilates the cervix, vagina, and vulva on the way. It is indicated in certain cases of hydramnios after rupture, in cases generally calling for speedy delivery, such as heart-disease, grave albuminuria, cases of shoulder-presentation in which version is impossible, and in retention of the placenta and placenta prævia.

1298. *Varnier on a Case of Peripheral Facial Paralysis in a New-born Infant.*——Berthe J., aged 17, was admitted under the care of Dr. Pinard, at the Lariboisière Hospital, on Aug. 31, having been in labour for the preceding twenty-four hours. Membranes ruptured, breech presentation, the right foot projecting from the vulva. Delivery was effected without difficulty of a strong child, weighing over seven pounds. Mlle. Carrier, the midwife, at once called attention to a curious deformity on the left side of the neck, behind and below the angle of the jaw, in the parotid region. The soft parts had been pressed against, giving rise to a well-marked depression. On a level with the left tragus there was an erythematous patch, the size of a florin, and a similar patch was observed on the left shoulder. It was obvious that the depression was due to the impaction of the shoulder. Directly the child began to cry, the existence of a complete left facial paralysis became evident. By the third day the symptoms began to disappear, but sucking was still imperfectly carried on. The mother presented no abnormality in the configuration of the pelvis. Three weeks after her discharge from the hospital she brought back the child for inspection, no sensible improvement having taken place. The child was then put under the electrical treatment, and in ten days not a trace of the affection remained. The explanation is that the fœtus, presenting by the breech in the right sacro-iliac position, had the head, as is usual in such cases, strongly bent towards the hinder shoulder. Owing to the premature rupture of the membranes, the fœtus was exposed to the contraction of the uterus, emptied of its amniotic fluid, for twenty-four hours, and this may account for the excessive lateral flexion of the head

1299. *Verneuil on Partial versus Total Amputation of the Uterus.*—Since M. Verneuil's last paper on this subject in 1884, he has amputated the cervix uteri in six cases, and none of his patients had succumbed. By adding together the number of months which have elapsed since the operation he obtains an average plus-life of 29 months. Of his previous cases he has only observed nine in which the disease has recurred, and in six of these he admits that he did not remove enough tissue. In twelve others there was no recurrence so far as he had been enabled to ascertain. Recurrence is, of course, the great danger, and does undoubtedly occur in a certain proportion of the cases, though, Dr. Verneuil affirms, not more frequently after partial than after total hysterectomy. His conclusions are as follows:—That partial amputation by means of the écraseur is applicable to hypertrophies and various forms of cancer. It is comparatively easy to perform, and is almost devoid of risk. Cancer, of course, can only be cured by complete extirpation, but, even if this be not achieved, the life of the patient is prolonged.

1300. *Terrier on Hysterectomy in the Treatment of Uterine Cancer.*—Out of twenty-seven hysterectomies performed for cancer of the uterus, four deaths were directly due to the effects of the operation, either from shock, hæmorrhage, or peritonitis. In twelve cases the cervix alone was involved; in three both the body and the cervix; in one the body and the broad ligaments; in one the cervix, the vagina, and the broad ligaments; and in one the cervix, the body, and the vagina. In four cases cancerous deposits were discovered distant from the original lesion. M. Terrier divides his cases into three categories. 1. Cases in which the cervix and the broad ligaments were affected. The prolongation of life was, on an average, six months. 2. Thirteen cases of cancer limited to the cervix. Two deaths followed the operation; ten patients lived from twenty-nine months to three years, equal to a mean prolongation of life of thirteen months. 3. Three total hysterectomies for lesions of the cervix and body of the uterus. In the first, performed in 1885, the patient is still living; in the second, the patient succumbed to shock; and, in the third, the disease recurred in three months. Alfred S. Gubb.

SYPHILOGRAPHY.

RECENT PAPERS.

1301. Dezanneau.—A Case of Inherited Syphilis in the Second Generation. (*Annales de Derm. et de Syph.*, No. 3, 1888.)

1302. Fournier.—A Case of Inherited Syphilis with almost general Gummy Infiltration. (*Gazette des Hôpitaux*, and *Annales de Derm. et de Syph.*, No. 4, 1888.)

1303. Lemonnier.—Syphilitic Diabetes. (*Annales de Derm. et de Syph.*, No. 6, 1888.)

1304. Falcone.—Very long Incubation of the Syphilitic Virus. (*Giornale Ital. delle Mal. Ven. e della Pelle*, and *Annales de Derm. et de Syph.*, No. 6, 1888.)

1305. Falcone.—A Case of Syphilis with the Skin Eruption limited to one-half of the Body. (*Ibid.*)

1306. Fournier.—Syphilitic Alopecia. (*Gazette Méd. de Paris*, and *Annales de Derm. et de Syph.*, No. 6, 1888.)

1307. Miller.—The Earliest Symptoms of Inherited Syphilis. (*Jahrb. für Kinderheilkunde*, and *Viertelj. für Derm. und Syph.*, Heft 4, 1888.)

1308. Teixeira.—Thallin in Gonorrhœa and Gleet. (*Lancet*, Sept. 1, 1888.)

1309. Smith, C. J.—A New and Rational Treatment for Gonorrhœa. (*Ibid.*)

1310. Philpot.—Gonorrhœal Rheumatism occurring at the Age of Nine Years. (*Lancet*, Oct. 6, 1888.)

1311. Hutchinson, J., Jun.—Syphilitic Disease of the Knee-joint. (*Lancet*, Oct. 20, 1888.)

1312. ANDERSON.—The Diagnosis and Treatment of Syphilitic Affections of the Nervous System. (*Brit. Med. Jour.*, Sept. 29, 1888.)

1313. LLOYD.—Congenital Gumma. (*Brit. Med. Jour.*, Oct. 27, 1888, p. 941.)

1314. BARKER.—Inoculation of Syphilis by Tattooing. (*Ibid.*, p. 943.)

ART. 1301. *Dezanneau on a Case of Inherited Syphilis in the Second Generation.*—This case, says M. Dezanneau (of Angers), having been investigated with all necessary exactness, proves that inherited syphilis may manifest itself in the second generation, and in the ordinary way. M. X., a non-commissioned officer, aged 23, entered the army in 1885. Six months later he contracted typhoid fever, and in two months was sent home on sick leave. A few months after his return to duty he was seized with violent pain in the head, especially on the left side. This was soon followed by tremor and weakness of the right arm and leg, and in February 1886 he was admitted into hospital with nearly complete hemiplegia both of sensation and motion. After several months' treatment by various means, including iodide of potassium up to 2 grammes daily, he was much better; but then contracted scarlet fever, and afterwards was again sent home to recruit his strength. On his return to his regiment in November he was in good general health, there being only slight weakness of the right side, which soon disappeared entirely. The patient remained well till September 1887, when the headache returned accompanied by vertigo. Then followed, as before, tremor of the right arm and leg and rapid diminution of power and of sensation. In November the hemiplegia was complete, and then also he began to suffer with his eyes. The ocular trouble increased in spite of iodide of potassium (1 gramme daily), and when he was first seen by M. Dezanneau on Dec. 4, blindness was complete in both eyes. There was also intense pain, photophobia, and lacrimation. Both corneæ were dull, opaque, and of a uniform salmon tint. The hemiplegia had disappeared with the exception of slight weakness in the arm and leg. A consultation was now held with Drs. Farge and Ferron, and all agreed that the case was one of syphilis. Mercurial inunction was begun at once, and atropine and cocaine applied to the eyes. During the first week of this treatment there was no improvement, and the pain was worse, but after six days salivation was produced, and then the lacrimation and photophobia began to diminish. Chlorate of potash was given, and although the inunction was continued, the stomatitis and salivation rapidly diminished. Three weeks after the beginning of the treatment, pain, lacrimation, and photophobia had all disappeared. The corneæ were still dull and slightly salmon-coloured, but vision was improving rapidly. Iodide of potassium and biniodide of mercury were now given internally, and the inunction was discontinued. A fortnight later large print could be read, and in another week the newspaper could be read without fatigue. Pain and all the other symptoms had disappeared, and the corneæ were clear, but there were traces of iritis in the left eye. The ophthalmoscope showed nothing abnormal in the deeper structures. The general health was perfect. The diagnosis was made from the following circumstances:—There was neither history nor sign of acquired syphilis in the patient himself, whose general health had always been excellent, the only affection during childhood having been slight impetigo of the face. The patient's mother had always had good health; her first two pregnancies had resulted in miscarriage without known cause; the third child was born at term apparently healthy, but died at the age of 7 months from some cerebral disease. The fourth and last child was the patient himself. The father presented neither sign nor history of any venereal disease. The only illness from which he had suffered was partial paralysis of the legs, which had come on about the age of 14 years, had lasted several months, and had been accompanied by violent headache, prostration, diplopia, and weakness of sight. The whole of these symptoms had disappeared under treatment, of the nature of which he was ignorant, and he had had good health ever since. He could give no information about his own father or mother, but stated that he himself was the sixth child, and that all the others were dead. He had heard that all five had died at or soon after birth. The author's conclusions are:—Syphilis of the grandparents, entailing death of the first five children and inherited taint in the sixth, showing itself at the age of 14 years by headache and paralysis, and causing, after marriage, two miscarriages and the death of a third child at the age of 7 months, finally transmitting to the fourth child the germ of a diathesis which showed itself after twenty years by giving rise to two attacks of hemiplegia and severe affection of the eyes.

1302. *Fournier on a Case of Inherited Syphilis with almost general Gummy Infiltrations.*—The mother of the child, who forms the subject of this paper, contracted syphilis in 1881. Her first child was born in 1885, and died of convulsions when two months old. The mother came under the care of M. Fournier at the Hôpital Saint Louis in the eighth month of her second pregnancy, suffering from mucous patches of the vulva. The child was born on Dec. 27, 1886, and remained apparently healthy till the age of four months and a half, when a syphilitic eruption appeared about the forehead and ears, together with coryza and lesions of the testes. In a few months the mother and child left the hospital, the latter being apparently cured. A few months later, however, the child became ill again, and two swellings appeared, one on each arm. The child died before it was a year old. At the autopsy multiple gummata were found on the cranium and in other bones, in the cellular tissue, the liver, the lungs, the testes, and the glands, especially the bronchial glands. In connection with this case M. Fournier gives certain rules with regard to the treatment of children born of syphilitic parents. 1. A child born, apparently healthy, of a syphilitic father is not to be treated, because paternal heredity is known to be much less fatal than maternal heredity, consequently the chances are that the child may have escaped. 2. A child born, apparently healthy, of a mother whose syphilis dates from long ago, and who has shown no signs of it during her pregnancy, is not to be treated, because in this case also the child may have escaped. 3. A child born, apparently healthy, of a mother whose syphilis is of recent date, especially if she have shown signs during pregnancy, ought to be treated energetically from birth; for in spite of appearances the child is certainly syphilitic, and the latent syphilis may at any moment break out and give rise to grave or even fatal manifestations.

1303. *Lemonnier on Syphilitic Diabetes.*—A traveller in the spirit trade, aged 49, had been under the care of the author for five months, suffering from diabetes. The daily amount of urine reached about 3 litres, and contained 84 grammes of sugar per litre. Strict dieting and various drugs produced no marked good effect. In March 1887 the patient complained of sore-throat and difficulty in breathing and swallowing. M. Lemonnier examined the throat and found an ulcerating gumma of the pharynx. There was also some dulness, with cracked-pot sound, and râles over the left side of the chest, copious expectoration, and wasting. There was a history of syphilis having been acquired about twenty years before. Mercurial inunction was now ordered, and iodide of potassium internally up to 4 grammes a day. In less than a month the pharynx was healed and the expectoration had ceased. The quantity of urine was 1,800 grammes, without any trace of sugar. During the succeeding eleven months the urine was examined on various occasions, but no sugar was found, although for six months there had been no restriction as to diet. All the abnormal chest signs had disappeared.

1304. *Falcone on Very Long Incubation of the Syphilitic Virus.*—A young student took to his bed on July 22, 1886, with an attack of typhoid fever which lasted five or six weeks. On Sept. 15 he felt slight pain at the right side of the frænum. On Sept. 24 induration was present and syphilis was diagnosed. The disease ran a regular course. The patient stated that the last sexual intercourse took place on July 21, the day before he was attacked by typhoid. According to this the primary sore appeared on the fifty-sixth day after contagion.

1305. *Falcone on a Case of Syphilis with the Skin Eruption limited to one-half of the Body.*—A man, aged 32, who, on Sept. 15, 1886, had an indurated sore on the right side of the furrow behind the corona, showed on Oct. 3 syphilitic adenitis on the right side, pustules of the hairy scalp equally distributed over the whole of the crown of the head, roseola of the right half of the body, and scaly lesions on the right palm and sole. The skin and mucous membrane of the left side of the body were free from eruption. The disease in other respects followed the ordinary course, and no explanation of the localisation of the rash was forthcoming.

1306. *Fournier on Syphilitic Alopecia.*—Alopecia in syphilis is met with in both sexes, and at all ages, but is more frequent in women. It is a common though not constant manifestation. Diday noted it in 53 out of 60 cases which had not been treated, which at once disposes of the prejudice which attributes baldness to the use of mercury. Syphilitic alopecia is a manifestation of the secondary stage; it appears usually from the third to the sixth month, but it may be delayed for a year, and, though rarely, even two years after contagion. It differs altogether from the alopecia of the tertiary period, produced by gummy ulcers of the scalp, and has nothing to do with the baldness of arthritic persons. From an etiological point of view it is necessary to distinguish between alopecia with and without lesions of the scalp. Symptomatic alopecia is the result of syphilides of the hairy scalp; essential alopecia, the form now under consideration, occurs without any appreciable intermediary lesion. It is seen chiefly in asthenic cases of secondary syphilis, but is also met with in mild cases, so that it is certainly connected with individual predisposition. Besides the scalp, syphilitic alopecia may also affect the other hairy regions of the body—the beard, the eyebrows (this falling of the eyebrows, especially in women, is characteristic), the pubic, and axillary regions. The hair also loses its polish, and is dry and woolly-looking; it looks like the hair of a wig. The baldness may affect all parts without distinction, and it is not symmetrical, whereas senile baldness is symmetrical. It may be diffuse or in patches, the latter being most frequent, but both forms are often present together. M. Fournier describes four degrees of baldness:—slight (the patient alone being cognisant of it), moderate (when it cannot be hidden), excessive (rare), and total baldness (exceptional). The baldness is only temporary, lasting at most five or six months. The hair returns completely. General mercurial treatment is very efficacious, the rubbing-in of alcoholic applications locally being only useful as an adjuvant.

1307. *Miller on the Earliest Symptoms of Inherited Syphilis.*—Dr. Miller, of Moscow, bases the following remarks on the observation of 1,000 cases of inherited syphilis. The first symptoms of the disease appeared during the first month after birth in 64 per cent., and during the second month, in 22 per cent.; in 24 per cent. of the whole number of cases the outbreak occurred during the third week. The earliest symptoms were rhinitis and pemphigus; the former was noted in 58 per cent., and the latter in 25 per cent. of all the cases. The author attributed the coryza in many cases to the influence of cold, and does not consider this sign specific of itself. Syphilitic pemphigus is either present at birth or appears during the first, or, at latest, during the second week after birth, while idiopathic and cachectic pemphigus does not occur before the second or third week. Congenital syphilitic pneumonia was very rare (one or two per cent.). The presence of this affection is of no assistance, from a diagnostic point of view, as it cannot be distinguished from congenital atelectasis. Desquamation of the skin is not peculiar to syphilis, nor are aphthæ, which often form superficial and sometimes deep ulcers. Rhagades of the lips, especially of the upper lip, are very characteristic. Cranio-malacia has nothing to do with syphilis, and swelling of the lymphatic glands is not part of the disease. Maculæ and papules were the commonest affections of the skin. Papules were observed in 74 per cent. of the whole number of cases, and in 24 per cent. of these the papules were the first sign of syphilis. Maculæ alone were found in 45 per cent., and in 17·9 per cent. of these as the first sign of the disease; but a mixture of maculæ and papules was the most frequent form of eruption (46 per cent.). The rarer manifestations of inherited syphilis are only briefly noticed in the paper.

1308. *Teixeira on Thallin in Gonorrhœa and Gleet.*—It is reported in the *Lancet* that Dr. Teixeira, in opening a discussion on the treatment of gonorrhœa, at a meeting of the Rio de Janeiro Medico-Chirurgical Society, stated that he had had surprisingly good results from the use of injections of sulphate of thallin. He generally began with a 1 per cent. solution, increasing the strength in acute cases to 2, and sometimes even to 5 per cent. The stronger solutions were applied by means of Ultzmann's catheter. Dr. Teixeira had never seen any symptom of irritation produced by thallin, and it usually cut short the disease in a few days.

1309. *Smith on a New and Rational Treatment for Gonorrhœa.*—The method of treatment to which Mr. C. J. Smith gives this title consists in the introduction of an ointment into the urethra by means of a modification of Allingham's rectal ointment introducer. Mr. Smith states that he is thus able to treat his cases with such marked success that the average duration of the attack is only five days. Mr. Smith says nothing about the composition of his ointment, nor how many cases he has treated with it; nor does he give information as to the signs of gonorrhœa or the stage of the disease in any case.

1310. *Philpot on a Case of Gonorrhœal Rheumatism.*—A girl, aged 9, was brought to the Victoria Hospital for Children. She had complained of smarting on micturition, and a purulent vaginal discharge had been noticed for a week. She then complained of aching pain down the back of the neck, followed by pain along the bicipital tendons of both legs, and then by pain in the left foot. On examination, the first metatarso-cuneiform joint was red, hot, swollen, and very painful, and there was extreme tenderness extending along the plantar fascia to the inner side of the heel. No other joint was affected. The labia were swollen, and there was a thick purulent discharge. The foot was put up in plaster of Paris splints, and with rest the pain and swelling gradually subsided. The mother said the girl had been indecently assaulted on three occasions by a youth who, it appeared, had been recently treated for gonorrhœa.

1311. *Hutchinson on Syphilitic Disease of the Knee-joint.*—At a meeting of the Pathological Society, Mr. Jonathan Hutchinson, jun., showed a knee-joint taken from the body of a sailor, aged 23, who had died of syphilitic stricture of the rectum and chronic nephritis. The patella was much thickened, and had left its normal groove on the femur to articulate with a ridge on the outer side of the external condyle, in which the cartilage was greatly hypertrophied. The internal condyle had lost its cartilage, and was adherent to the internal tuberosity of the tibia by firm fibrous bands, in which was merged the internal semilunar cartilage. The external tuberosity of the tibia was roughened on its cartilaginous surface. In the centre of the ligamentum mucosum was a leathery gummatous mass, which the microscope showed to consist of ill-defined cells and fibrous tissue. There were no nodes about the bones, and the synovial membrane and ligaments were practically healthy. There was no eburnation. The kidneys weighed 35 ounces, and showed what was probably a form of diffuse syphilitic disease, but there were no isolated gummata. There was a fibrous stricture of the rectum, with extensive ulceration around it. There were no signs of inherited syphilis. The patient was a Swede, and no clear history could be obtained.

1312. *Anderson on the Diagnosis and Treatment of Syphilitic Affections of the Nervous System.*—In an address on this subject delivered at the last annual meeting of the British Medical Association, in Glasgow, Dr. McCall Anderson begins by protesting against the view that few cases of syphilis are followed by affections of the nervous system, and that mercury is only necessary for severe outbreaks of the disease. Dr. Anderson's own view of the matter is that just because 'mild' syphilis is apt to be treated in a cavalier fashion, and without due care and persistence, disease of the nervous system is very apt to follow in its wake, and that such disease is much more common than is generally supposed. The author then proceeds to consider in a series of propositions the grounds upon which the syphilitic nature of a lesion of the nervous system may be suspected, basing his remarks on a collection of twenty-four cases which had occurred recently in his own practice, and of which he had been able to obtain sufficiently accurate records. The following are the propositions:—1. A history of the entrance of the syphilitic poison into the system. 2. The discovery of other manifestations of syphilis. 3. The discovery of traces of bygone syphilitic manifestations. 4. The presence or the history of pain in the joints, bones, or head. 5. The appearance of the patient. 6. The age and sex of the patient are very important. 7. The occupation of the patient. 8. Syphilitic nervous lesions are frequently multiple. 9. The variability of the symptoms. 10. In cerebral syphilis certain fundamental types are very often recognised. 11. Eye symptoms. 12. Syphilitic affections of the nervous system are generally unaccompanied by syphilitic affections of the other viscera, and *vice versâ.* 13. The results of treatment.

1313. *Lloyd on a Case of Congenital Gumma.*—At a meeting of the Birmingham and Midland Counties Branch of the British Medical Association, Mr. Jordan Lloyd showed a girl, aged 15, who had suffered for several years from swellings in the course of the right sterno-mastoid muscle, which were thought to be strumous glands. An operation having been begun for their removal, the whole sterno-mastoid muscle was found to be converted into gummatous tissue, and no glands were discovered. There was a history of hereditary syphilitic disorders in her brothers and sisters.

1314. *Barker on the Inoculation of Syphilis by Tattooing.*—Surgeon F. R. Barker reports that out of fifteen soldiers tattooed by one man eleven contracted syphilis. The men were tattooed at various dates during the year 1888, and the periods of incubation varied from eighty-seven to thirteen days. The operator was examined and found to have mucous tubercles in his mouth, a coppery rash on the chest, a scar on the penis, enlarged glands, &c. He admitted that he had mixed his colours with saliva and had also put the tattooing needles in his mouth. ARTHUR COOPER.

LARYNGOLOGY AND RHINOLOGY.

RECENT PAPERS.

1315. COHEN, J. SOLIS.—Cantatory Paresis. (*The Medical News*, Oct. 6, 1888.)

1316. INGALS, E. FLETCHER.—Chronic Rheumatic Laryngitis. (Reprint from *Transactions of the Thirty-Eighth Annual Meeting, Illinois State Med. Society*, held in Rock Island, May 17, 1888.)

1317. INGALS, E. FLETCHER.—Subglottic Laryngeal Tumour. (*The Medical News*, Nov. 3, 1888.)

1318. GENEUIL.—On the Injection of Lemon-juice in Epistaxis. (*Deutsche med. Zeitung*, No. 84, 1888; and *Bull. Gén. de Thérap.*, Nov. 30, 1887.)

1319. POESCHEL, H.—On the Treatment of Diseases of the Naso-pharynx. (*Deutsche med. Zeitung*, No. 84, 1888; and *Münch. med. Wochensch.*, No. 14, 1888.)

1320. SALZER, FRITZ.—A Tracheal Canula for Patients with Bronchocele. (*Wiener klin. Wochensch.*, Oct. 18, 1888.)

1321. SCHUTTER, W.—Contribution to the Study of Empyema of the Frontal Sinus. (*Monatsschrift für Ohrenheilkunde*, October 1888.)

1322. GOLDSCHMIDT, DR.—On the Perchloride of Iron in the Treatment of Diphtheria. (*Bull. Gén. de Thérap.*, July 15, 1888.)

ART. 1315. *Cohen on Cantatory Paresis.*—Under this head Dr. J. Solis Cohen (*The Medical News*, Oct. 6, 1888) describes a failure of the singing voice at some special note of the register, most commonly at the ninth note in the scale in the key of C for tenor and soprano voices, and at the seventh for bass and contralto voices. In other instances all tones are uncertain above the one at which the break begins. In most instances (but not in all) there is a slight congestion of one or both vocal bands, which becomes more and more pronounced as the defective tone is approached in singing the scale from below upward. In marked instances there may be lack of the longitudinal tension of the vocal bands. For treatment, absolute rest of the singing voice, and comparative rest of the conversational voice, are recommended; for drugs, strychnine, quinine, and cocaine. Finally, systemic vocal exercises limited to the unimpaired portion of the register, and daily percutaneous applications of the induced current. Great care should be exercised in resuming prolonged vocal efforts for a year or two after apparent cure, lest the condition recur in an aggravated form.

1316. *Ingals on Chronic Rheumatic Sore-throat.*—Dr. Fletcher Ingals (*Transactions of the Thirty-eighth Annual Meeting, Illinois State Medical Society*, May 17, 1888), who formerly used the term chronic rheumatic laryngitis, now prefers the above, as he finds in many cases other parts of the throat are involved. He describes the condition as occurring much more frequently in men, and usually in the fall and spring months. He has always seen it in adults between 25 and 60. The affection presents no anatomical characteristics, but in most cases there are 'circumscribed spots of slight but changeable congestion and swelling.' He bases its connection with rheumatism on the following facts:—1. In nearly all the cases the patients have inherited or acquired the rheumatic diathesis, and are subject to rheumatic pains in other parts of the body. 2. These pains observe the same laws as other rheumatic pains in regard to intermission, remission, or exacerbation, with varying conditions of the weather. 3. Only those remedies and surroundings which have proven useful in the treatment of rheumatism seem in any way influential in curing the disease. The pain, which may be referred to the thyroid or cricoid cartilages or to the hyoid bone, is *nearly always increased* by pressure, which feature seems, according to the author, to distinguish it from neuralgia. The history and the absence of the localised though slight congestion and swelling also assist the diagnosis. Anti-rheumatic remedies are indicated, but the author has obtained the best results from extract of phytolacca, gr. iij. or iv., three or four times daily, with tonics and laxatives, and the occasional use of iodide of potassium or of bromide of potassium. For local application a spray of morphia, gr. iv., carbolic acid and tannic acid, āā gr. xxx., glycerine and water, āā ʒiv., to be applied once daily. In some cases tincture of iodine, a sixty-grain solution of nitrate of silver, or a superficial application of the galvanic cautery has been useful. Two cases in illustration are described.

1317. *Ingals on a Subglottic Laryngeal Tumour.* Dr. Fletcher Ingals (*The Med. News*, Nov. 3, 1888) describes an interesting case of this description treated by cauterisations with chromic acid. The patient was aged 24, and there was 'positive evidence of no specific taint.' When first seen the vocal cords were slightly congested, and at about the middle of the left cord there was a small conical outgrowth about 3 millimètres in diameter, and in the subglottic region just below the anterior commissure a small yellowish, somewhat conical tumour, measuring as nearly as could be estimated 4 millimètres in thickness at its highest part, and 6 or 7 millimètres across its base. Its surface was smooth, and but slightly nodular, and its base occupied partly the inner surface of the thyroid cartilage, and partly the inner surface of the crico-thyroid membrane. Remainder of larynx normal. After the patient had taken iodide of potassium for eight months it was found that the subglottic tumour had increased to 6 millimètres in thickness, and to fully a centimètre in diameter at its base. The outgrowth had disappeared from the vocal cords, and the congestion had subsided. The larynx having been anæsthetised with 10 per cent. cocaine spray, chromic acid was applied to the surface of the tumour. After seven cauterisations at considerable intervals, the tumour was reduced to one-tenth of its largest size. The author believes that the treatment would speedily eradicate the growth if two or three applications could be made at intervals of three or four weeks, which he proposes to do. The mode of application was by fusing a small quantity of chromic acid on to the end of an aluminium wire, the latter being covered over with a piece of thin India-rubber tubing which had been cut away in front to expose the acid, and was fixed by winding round it a silk thread, which extended up to the handle. The author speaks of the growth as a cartilaginous tumour, but the evidence for this is not clear.

1318. *Geneuil on the Treatment of Epistaxis.*—Dr. Geneuil (*Deutsche med. Zeit.*, No. 84, 1888, and *Bull. Gén. de Thérap.*, Nov. 30, 1887) recommends the injection with a small syringe of freshly expressed lemon-juice, after previous syringing of the nose with water to remove the blood-clots.

1319. *Poeschel on Diseases of the Naso-pharynx.*—Dr. H. Poeschel (*Deutsche med. Zeit.*, No. 84, 1888, and *Münch. med. Wochensch.*, No. 14, 1888) recommends for chronic naso-pharyngeal catarrh boracic acid used four times daily, in adults as a snuff and in children by insufflation. He also uses it in middle-ear catarrh, laryngeal croup, and pertussis.

1320. *Salzer on a Tracheotomy Canula for Cases of Bronchocele.*—Dr. Fritz Salzer (*Wiener klinische Wochenschrift*, No. 29, 1888), as the result of experience at Billroth's clinique, recommends a canula for these cases which is characterised by its short curve and adjustable shield. [It does not appear to differ materially from a Durham's canula.—*Rep.*]

1321. *Schutter on Empyema of the Frontal Sinus.*—Dr. Schutter, of Groningen (*Monatsschrift für Ohrenheilkunde*, October 1888), relates two cases of empyema of the frontal sinus in which he introduced a canula from the nasal cavity and washed out the sinus. In the first case complete recovery ensued; in the other the cessation of the discharge was only temporary, and external perforation of the sinus was proposed but refused. After filling the sinus with a solution of borax, its contents were blown out into the nasal cavity by forcing air through the canula.

E. CRESSWELL BABER, M.B.

1322. *Goldschmidt on the Perchloride of Iron in the Treatment of Diphtheria.*—The author strongly commends the topical application of solutions of the perchloride of iron to the throat in diphtheria. He objects to the applications being made by means of a brush on the ground that it may determine laceration of the false membranes, and consequent exposure of the bleeding capillaries to septic absorption. The author prefers intranasal injections wherever there is reason to suspect the existence of exudations on the posterior surface of the soft palate or in the nostrils. When the diphtheritic lesions are confined to the buccal mucous membrane he simply gives twenty-drop doses of a solution of the perchloride, repeated every two hours. He claims that with this treatment the false membranes become discoloured, and finally detached, when the patients' general condition improves, the enlargement of the submaxillary glands subsides, and the appetite returns. Although it is not easy to explain the action of the drug when given internally, its topical effect is marked and reliable. While the extension of the exudation may be prevented if the perchloride treatment be taken in hand early, it is without effect when the larynx has become involved.

ALFRED S. GUBB.

REVIEWS.

ARTICLE 1323.

De la Dermatite Herpétiforme de Duhring. Par le DR. BROCQ. (*Extrait des Annales de Dermatologie et de Syphiligraphie.*). Paris: Masson.

AMONGST the valuable *critiques* by Dr. Brocq which have enriched the pages of the *Annales de Dermatologie*, there are none more important or likely to prove more fertile than that which has recently appeared on the *dermatitis herpetiformis* of Duhring. For a long time considerable confusion has existed in the nomenclature of vesicular eruptions of the skin, a confusion which represents only too faithfully the want of precise knowledge as regards their diagnosis and etiology. But although a great step in advance was made in regard to our knowledge of these eruptions when Dr. Duhring, in 1884, made his first communication on his *dermatitis herpetiformis*, the confusion which has attended our ideas as regards this class of affections has been by no means dissipated by that author's instructive memoirs, as all readers of recent dermatological literature must be aware.

Dr. Brocq has endeavoured, in a series of luminous papers, to bring together all the published facts as regards this class of cases, and has subjected them to a close and able analysis. The result has been that he has come to the conclusion that restrictions ought to be made regarding the admission of these vesicular affections into such a group as that described by Dr. Duhring. Dr. Brocq himself believes that it is possible to identify a specific disease, which he proposes temporarily to name *polymorphous pruriginous chronic dermatitis*, discarding the term *herpetiform*. He excludes from this type of cases the well-marked specific affection recently so thoroughly discussed by Kaposi, the impetigo herpetiformis of Hebra. He also excludes from it the series of cases described by Milton in 1872 as herpes gestationis. To these latter cases Brocq would apply the term 'relapsing polymorphous pruriginous dermatitis of pregnancy.' He also excludes various forms of herpes, the varieties of pemphigus, and a certain class of cases published under the term 'hydroa.' Brocq believes that the dermatitis herpetiformis of Duhring is a generic name which designates a group of facts which have certain common characters, but which can be grouped into several distinct categories.

The more limited affection to which Brocq has given his provisional and somewhat long designation can, he states, be diagnosed by four chief characters—namely, first the polymorphous nature of the eruption; second, the painful condition of the skin; third, its long duration and successive eruptions presenting different phases; fourth, the good condition of the general health. It is distinguished from polymorphous erythema by its much greater tendency to become vesicular, bullous, and pustular; by the intense itching; by its chronic character and its mode of evolution. The same characters distinguish it from the herpes iris of Bateman. It is distinguished from acute pemphigus by its duration, successive eruptions, greater polymorphism, itching, and good state of the general health. It is distinguished from chronic pemphigus by its polymorphism, by the successive eruptions separated by intervals of no eruption, by the painful symptoms, and good state of the general health. Although he believes that it is correct to diagnose a true bullous urticaria, yet he believes that further observations may tend to show that the affection so designated has some connection with the class of cases he is discussing.

The paper is enriched by a series of cases extracted from various sources, the perusal of which is full of instruction to anyone who is interested in dermatology.

In discussing herpes gestationis, Dr. Brocq brings together twenty-two reported cases, which he divides into three categories, in the first of which the eruption began after confinement; in the second during pregnancy; and in the third group, consisting of mixed cases, he cites an example in the case of a woman in whose third pregnancy the eruption began five days after confinement; in the fourth pregnancy four days after it; in the fifth pregnancy from the third month of pregnancy lasted until the seventh, then disappeared, and again began five days after delivery.

The author calls attention to the common error which has been made by those who write on these subjects of considering herpes gestationis as identical with the impetigo herpetiformis of Hebra, an error which it is difficult to suppose would have been made by anyone who had given sufficient weight to the distinctive points so clearly laid down by Hebra and Kaposi.

ARTICLE 1324.

The Military Red Cross Corps. By W. THORNTON PARKER, M.D. (Munich).

THIS little pamphlet is a reprint of two articles written by Dr. Parker for the *Philadelphia Medical*

Times, and the practical hints contained in it render it worthy of the consideration of all interested in ambulance work.

The pamphlet opens with the following suggestion: 'As an auxiliary to the regular hospital corps of the army, each regiment should be provided with a regimental bearer corps, or more properly named, a Red Cross Corps.'

Dr. Parker then goes on to say how such a corps should be formed from each regiment by choosing those men most interested in the subject, and who prove themselves most efficient after attending a course of ambulance lectures followed by an examination by one of the regimental surgeons.

The number and rank of officers, the number of the men in each corps, together with their outfit and details of their duties during action on the field, is fully explained; special stress being laid upon the form of stretcher which should be used by the corps, and those in use in New York and other hospitals are recommended. These stretchers seem to be eminently practical and portable, and deserve more universal adoption than they at present seem to have. Each consists of three pieces of heavy canvas of equal size, the ends of which, being turned over and firmly stitched down, leave a sleeve through which poles are passed; the three pieces being placed one after another on these two parallel poles, which extend far enough beyond for handles. Two iron crossbars, having rings to admit the poles, are used to extend the stretcher. The canvas is divided into three pieces for the comfort of the patient when the stretcher is taken from under him. Various substitutes for the stretcher are suggested and described, and Dr. Parker passes on to give a translation of Professor Esmarch's account of the application of the triangular bandage bearing his name to wounds in the various parts of the body.

The little pamphlet closes with rules for stretcher-drill, and cautions as to how persons injured in the different regions of the body should be carried. Such a 'Military Red Cross Corps' seems much like the 'Volunteer Medical Staff Corps,' which has been formed of late years in connection with the English Volunteer service, and which has already rendered valuable service to the Volunteers when out for their Easter and autumn manœuvres. To the officers of this Volunteer Medical Staff Corps, and, in fact, to all interested in ambulance matters, Dr. Parker's practical little pamphlet may confidently be recommended. OWEN LANKESTER.

ARTICLE 1325.

On the Surgery of the Knee-Joint, and the Responsibility placed on the Physician and General Practitioner by the Modern Progress of Surgery. By C. B. KEETLEY, F.R.C.S., Senior Surgeon to the West London Hospital. London: Baillière, Tindall, and Cox.

THIS small work contains two republished addresses that were delivered by Mr. Keetley whilst acting as President of the West London Medico-Chirurgical Society. The former, which is offered as a short statement of what can be done, and what the author believes ought to be done, in cases of chronic disease of the knee-joint, fitted for operative treatment, discusses very clearly the important modification in such treatment known as arthrectomy. Mr. Keetley has done well in bringing this subject again under the notice of English surgeons, for the operation of removing merely the affected structures of a tuberculous joint, though long advocated and practised by Volkmann, seems to have been recognised somewhat reluctantly in this country. This reprint, together with more recent contributions to medical societies, will no doubt bring the operation into favour and lead to a more extended experience of its value in comparison with that of older methods of treatment, and also a clearer discrimination of the cases to which it is applicable. The second address is an interesting but too brief review of the progress made by modern surgery in its attack on domains hitherto occupied exclusively by the physician, and urges the necessity in the first place of a systematic co-operation of both branches of the profession, and, in the second place, of a good working knowledge amongst all practitioners of the earliest and distinctive symptoms of the internal affections which may now be fairly regarded as often amenable to operative treatment.

ARTICLE 1326.

Lectures on Ectopic Pregnancy and Pelvic Hæmatocele. By LAWSON TAIT, F.R.C.S.Edin. and Eng., LL.D., Professor of Gynæcology in Queen's College, Birmingham; Surgeon to the Birmingham and Midland Hospital for Women; late President, British Gynæcological Society, &c. Birmingham: The 'Journal' Printing Works.

MR. TAIT'S *Lectures* form a small book containing barely one hundred pages, but the importance of its contents is altogether out of proportion to its size. For library purposes the book is too small, and among other disadvantages it does not bear its title on its back. Yet every reader must feel grateful to the author for the conciseness of his style. Subjects of high interest are discussed within a very few pages, and with great clearness. Mr. Tait's peculiar opinions can therefore be learnt first-hand, with but little expenditure of time, by the perusal of this work, which in form is rather a pamphlet than a book.

The author's views on ectopic gestation and its treatment are well known to all who take any interest in obstetrics and abdominal surgery. His theories are based on the cause of impregnation within the tube; the alleged invariably tubal nature of all ectopic pregnancies in the first instance; and the relations between the directions in which the fœtal sac may rupture, and the two different varieties of pelvic hæmatocele. The ovum, he declares, is never normally impregnated except in the uterus. Tubal disease, destroying the ciliated epithelium of the tube, allows spermatozoa to enter its canal, and thus an ovum may be impregnated and adhere to the diseased tubal tissue. The sac is certain to rupture before the twelfth or thirteenth week of pregnancy. The chances are that it will burst into the peritoneal cavity. Then fatal intra-peritoneal hæmatocele will ensue, unless operation is immediately performed. For when blood escapes into the peritoneum it does not readily coagulate, and all conditions promote hæmorrhage. On the other hand, the sac may burst so as to empty its contents into the connective tissue between the layers of the broad ligament. This accident involves extra-peritoneal hæmatocele. The connective tissue of the pelvis, and the pressure of the layers of the broad ligament, assist in promoting coagulation and checking hæmorrhage. The fœtus, may live to term and be retained after that period, but its retention after death involves, in Mr. Tait's opinion, greater danger than its removal. When still alive it must not be killed, and it may be saved by abdominal section. Intraperitoneal pregnancy is always secondary, according to Mr. Tait, to the form of ectopic gestation just described. He does not believe that the patient may recover, and the placenta and fœtus continue to develop after primary rupture of a tubal sac into the peritoneum. The close relation between his theories concerning ectopic gestation and his opinions in relation to pelvic hæmatocele thus become evident.

Operation at the time of rupture is performed much after the fashion of ovariotomy, the appendages being removed with the sac. When the fœtus in the secondary sac lives to term, or when its dead body has to be extracted at any period, the sac is opened. The fœtus is then removed, the cord tied close to its placental insertion, the placenta left untouched, and the sac, after careful flushing with hot water, is closed by sutures. Mr. Tait does not dread the effects of leaving placental tissue behind, and, should septic symptoms appear, he advises that the sac should be opened and the placenta removed. As its vessels will, under these circumstances, be plugged, there will be little danger of hæmorrhage. Mr. Tait, relying on an interesting paper by Drs. Hart and Carter, believes that the peritoneum may be avoided, when the sac is opened for the extraction of a fœtus. To do this, however, the incision must be made to one side of the middle line; right or left according to the case. No doubt this increases the difficulties of the operation to relatively inexperienced surgeons.

Such are the principles and practice of Mr. Lawson Tait in respect to ectopic gestation, a subject in which he is deeply experienced. Criticism is here almost out of the question. No doubt every line of the *Lectures* will be disputed by other able authorities. The precise manner in which the ovum is impregnated remains, after all, unproven. The possibility of primary ovarian and intra-peritoneal pregnancy is stoutly maintained by many observers. In this matter, however, the views of Mr. Tait are almost conclusive. To refute them, his adversaries must show examples of these alleged varieties of ectopic gestation when in a very early stage. Tubal gestation can be detected at a glance, before adhesions and other morbid changes have obscured anatomical relations. Ovarian and primary intraperitoneal pregnancy, at the first or second month, have never been clearly demonstrated; later, they cannot be clearly demonstrated at all. For adverse opinions concerning pelvic hæmatocele and hæmatoma, the works of standard living authorities must be consulted. All practical surgeons will agree with Mr. Tait in his advocacy of immediate operation whenever there is fair evidence of rupture of the tube or of acute symptoms of pelvic hæmatocele which may be set up by that accident or by any other cause, for diagnosis is often difficult in the extreme. The best manner of operating in the later stages of ectopic gestation is much disputed. The high reputation of Mr. Tait as an operator is sufficient to ensure for this work a wide circulation. It will in any case repay perusal. The reader must never forget, however, that the clearest theories may be wrong and that a line of practice safe for an expert like the author may lead a less experienced surgeon or obstetrician to disaster. ALBAN DORAN.

ARTICLE 1327.

Ueber die Ophthalmia Migratoria (Sympathetic Ophthalmitis). By R. DEUTSCHMANN. Leopold Voss. 1889.

THE appearance of this monograph is most opportune. The author's views of the pathology of sympathetic ophthalmitis are well known, and have met with very general acceptance; but the experiments on which they were based have never been fully corroborated by other experimenters—indeed, of the only two extensive workers in this field, with whose writing we are acquainted, the one (Gifford) obtained results which differ from Deutschmann's in several particulars; while the other (Randolph), an abstract of whose article we published in the LONDON MEDICAL RECORDER, Oct. 20, 1888, p. 422, impugns his accuracy in almost every respect. In the present work Gifford's objections are met fully and fairly. We are, however, disappointed to find that the only reference to Randolph's paper is a postscript which states that the writer only heard of it after the printing of this work had been completed, and had not had an opportunity of perusing it. We had no idea that Knapp's *Archives* were difficult of access in Hamburg. However, it is probable that on the whole the truth is as likely to be elicited by a full statement of Deutschmann's case, such as is contained in this book, as by evidence specially collected to refute a particular writer.

The term 'sympathetic' ophthalmia is objected to as implying erroneous conception of the pathology of the affection. For it is substituted the term 'ophthalmia migratoria,' which reminds us of Colman's paper on 'Neuritis Migrans,' published in 1877 (*Berlin klin. Wochensch.*, p. 153).

It is much to be regretted that the author has given neither index nor table of contents, and has not divided the book into chapters. It might thus have been made to serve as a fairly complete book of reference for most of the points connected with the subject.

As stated in the preface, the book not only gives a summary of all the author's previous experiments, but some new matter—both clinical and pathological—has been added.

The book commences with an able but short review of the history of the subject, with which we need not further concern ourselves here except to point out that the separation of sympathetic 'neurosis,' or 'irritation' from true 'sympathetic ophthalmitis,' now universally agreed upon, is a doctrine of modern origin, and that all theories of the pathology of sympathetic inflammation which were advanced prior to this of necessity contain an element of ambiguity.

In 1881 Leber advanced the view that sympathetic ophthalmitis was a local extension of inflammation by continuity of tissue, probably through the medium of the lymph channels of the optic nerve, and that the inflammation was probably of septic origin. Snellen in the same year, in a paper read before the International Medical Congress in London, enunciated similar views, and although the reflex theory has found a few supporters it may be said to have been practically supplanted by the septic theory.

In 1882 Deutschmann published in Graefe's *Archives* his first series of experiments. Although these have been very frequently quoted, we must give a very brief account of them. It was found that by injecting chemical irritants into the vitreous of one eye in the rabbit an inflammation was set up in the other eye, which showed itself first as an optic neuritis, and then extended to the uveal tract, reaching as far forwards as the ciliary body. Examination showed purulent infiltration of the eye operated on, and inflammatory changes in the optic nerve, its sheath, and intervaginal space on each side, as well as in the chiasma, and to a less degree in the adjacent cerebral pia mater. On both sides the inflammatory changes increased in intensity as the globes were approached.

[It is to be noted here that Gifford, who is opposed to Deutschmann on several points, admits from an examination of his specimens that these changes really existed. This is important, as Randolph (*loc. cit.*) plainly implies that the normal nucleation of the nerve—which is also greatest near the globe—had been mistaken for a pathological change. That the distinction is not always easy to make is we think evident from the following sentence in Mr. Byrom Bramwell's recent work on Intracranial Tumours, p. 53. 'I would ask what degree of trabecular thickening and nuclear proliferation is indicative of neuritis? When these appearances are little marked, I have felt considerable difficulty in deciding that they were distinctly inflammatory. In several instances in which there was no reason to suspect inflammatory changes, I have found a degree of thickening and nuclear excess which has appeared to me to be excessive, and which would, I suspect, by some observers, if they were examining cases of papillitis, be considered as indicative of a descending neuritis.'—*Trans.*]

These experiments seemed to show that an inflammation of one eye could extend to the other along the optic nerves and their lymph spaces. But an inflammation excited by chemical irritants could hardly be considered as analogous to that which produces sympathetic inflammation. Some experiments by Leber had shown that foreign bodies could be introduced into the vitreous without exciting more than a localised inflammation, provided they were aseptic, and since a perforating wound, and therefore the possibility of septic inoculation, exists in all cases of true sympathetic ophthalmitis, it seemed not unlikely that the septic organisms thus introduced were the real cause of the mischief.

Experiments were accordingly made with septic matter in rabbits to see if sympathetic inflammation could be thus excited. The difficulty was twofold: to avoid too violent an inflammation in eye operated on; and to prevent the animal dying from systemic infection. Finally, cultures from staphylococcus aureus and albus were used. These were very suitable for the purpose, because from their wide distribution they are likely to be the cause of inflammation in the exciting eye in the human subject. By this means optic neuritis was set up in the second eye, and this was succeeded by turbidity of the vitreous, but all the animals died 'before the appearance of a typical iritis or cyclitis.' These, however, appeared if the route were shortened by making the injection into the optic nerve itself. In either case micrococci were found in same positions as the inflammatory changes described above.

There is a consensus of opinion that the lymph current in the intervaginal spaces flows towards the globes; therefore if the cocci travelled by this route they must have gone against the stream; this Deutschmann explains partly by their propagation and partly by their spontaneous movement. When once they had reached the chiasma they would be caught in the descending stream and readily carried to the other eye.

These experiments have been repeated by Alt, Mazza, and Gifford. Alt's were few but confirmatory. Mazza came to the conclusion that the second nerve only became affected if meningitis was present. Gifford's results differed in several important particulars, although they were confirmatory of the main proposition. Gifford's papers are considered most fully and fairly by the author in twenty-five pages, and as we have already given a rather full extract of them (LONDON MEDICAL RECORD, Jan. 15, 1887) we will here only draw attention to the salient points. Gifford agrees as to the lymph current from the brain to the eyes in the intervaginal spaces, but believes in another up-current accompanying the central vessels of the nerve, which leaves the nerve with the vessels, and reaches the apex of the orbit, whence it 'probably' passes through the sphenoidal fissure to cranial cavity. The experiments that he made with the staphylococcus were without result, for although the inflammatory products could be traced a short distance along the optic nerve sheaths, the cocci themselves could not be found beyond the lamina cribosa. The experiments on which the above conclusions were founded were made partly with coloured pigments in suspension and partly with the spores of anthrax. Deutschmann considers the latter unsuited for demonstrating the direction of lymph currents, for, owing to the rapidity with which they multiply, they may travel in a direction opposite to the lymph current. The weak point in Gifford's experiments is that he has not actually demonstrated the passage of the bacilli from the orbital to the cranial cavity. That bacilli of this nature should invade the orbit from the intervaginal space is not extraordinary, but Deutschmann points out the improbability of Gifford's interpretation of their presence there from several points of view. In the first place it would mean that, having been brought back to the brain from the eye, they were, at any rate in part, returned to it; in the second place it would be exceedingly difficult to understand how, if the cocci followed this course, meningitis could be absent in any case, for they would mix with the cerebro-spinal fluid. Moreover, the acceptance of this view would imply that in every case of sympathetic ophthalmitis a re-infection of the exciting eye took place, and of this there is no clinical evidence. In one of Gifford's own experiments there were bacilli in the intervaginal space of each optic nerve although they were only beginning to pass into the orbit with the central vessels.

As regards Gifford's failures with the staphylococci, Deutschmann thinks that too much importance should not be attached to them. In the human subject not every injury, probably not the majority, that is capable of causing sympathetic inflammation really does so. Bacilli or leucocytes may by their abundance block the lymph channels, and the healthy tissues possess a certain power to resist the growth of noxious organisms.

To render these experiments applicable to human pathology, it was necessary to prove (1) that the staphylococcus or some similar micro-organism existed in the exciting eye; (2) that it existed in the sympathising eye; (3) that their presence was deleterious, and the probable cause of the inflammation, and not merely accidental.

To establish the first point, Deutschmann examined a large number of eyes which had actually caused sympathetic ophthalmitis. The experiments (nineteen in number) are given fully. Culture experiments led in all except one case to the production of cocci which 'possessed all the characteristic peculiarities of the staphylococcus pyogenes aureus and albus of Rosenbach.' This observation has been confirmed by other observers, but its accuracy is disputed by Randolph (LONDON MEDICAL RECORDER, Oct. 20, 1888, Art. 922). Experiments on the sympathising eye were not so easy to make, but five such are given. In one, cultures were made from a portion of iris removed; in another, from the fluid removed by paracentesis. In two others this was done, and the other eye was enucleated. The fifth case, in which paracentesis was performed, does not, we think, prove anything, since an iridectomy had previously been performed. Micrococci were raised from all, and in the case in which the exciting eye was also used the micrococci in the two were identical.

In order to establish the third point, rabbits' eyes were inoculated with the micrococci thus obtained, and the results were the same as were obtained when the inoculating material was obtained from other sources.

In the last sixty pages the writer gives a very exhaustive and able summary of the clinical literature of the subject, and very briefly his own views on treatment. This will well repay perusal, but as our object has been merely to lay before our readers Deutschmann's views of the pathology of sympathetic ophthalmitis, and to indicate what points are in dispute, we will abstain from making any further comment on this part of the book.

W. ADAMS FROST.

ARTICLE 1328.

The Pathology and Treatment of Displacements of the Uterus. By DR. B. S. SCHULTZE. Translated by JAMESON J. MACAN, M.A., M.R.C.S., and Edited by A. V. MACAN, M.B., M.Ch., &c.

THE pathology and treatment of displacements of the uterus has always formed a disputed question amongst gynæcologists, and so we welcome any book on the subject, especially one such as this, containing, as it does, the fruits of many years of patient and careful observation. Whether some of the novel views put forward will be finally accepted remains to be seen. On the whole, the author steers a middle course between those who think that no displacement is of any consequence, and others who consider the pessary in one form or another as a panacea for all uterine disease. The author admits that flexions may be rigid in the angle, but maintains that 'the flexibility of the uterus in the angle of flexion is normal or more than normal.' He finds that cicatricial contraction in the posterior segment of one or both broad ligaments is the most frequent cause of acquired pathological anteflexion. The contraction of these bands causes flexion at their point of adherence to the uterus. Treatment is therefore directed towards the absorption of the bands, or, failing that, to supporting the uterus from below, so as to relax the tension of the affected folds.

On the symptom, dysmenorrhœa, so commonly associated with anteflexion and other displacements, the author is most dogmatic. He will not allow for a minute that the pain may be due to obstruction at the point of flexion, but states that it is always due to metritis or parametritis. No doubt many cases can be traced to this cause, but some at least are due to obstruction. How otherwise will Dr. Schultze explain the entire disappearance of the pains so often observed in these cases after forcible dilatation of the uterine cavity? Surely if metritis or parametritis were present such a proceeding would increase the inflammation, and so add to the pains instead of sending them away. Retroflexion is treated with a figure-of-eight pessary. The general curve of this is much the same as a Hodge, but the upper loop surrounds the cervix and so retains it in position. In a very few instances only has it been found necessary to use an intra-uterine stem in addition. In women whose pelvic floor is not firm or elastic enough to give support to a figure-of-eight, a sledge-shaped pessary made of wire, covered with rubber, is found to answer better. Almost every point of importance is illustrated by a simple but excellent diagram. Although there is in this work the usual tendency to over-elaboration common to the German school, it is a most valuable contribution to gynæcology, and well worthy of study. The translation is excellent, and leaves nothing to be desired.

J. INGLIS PARSONS, M.D.

ARTICLE 1329.

Die Traumatischen Neurosen, nach dem in der Nervenklinik der Charité in den letzten 5 Jahren gesammelten Beobachtungen; bearbeitet und dargestellt von Dr. med. Herm. Oppenheim, Docent. (The Traumatic Neuroses, from observations made during the last five years in the Clinic for Nervous Diseases, Charité Hospital, Berlin.) Pp. 146. Berlin: A. Hirschwald. 1889.

THIS work, which is dedicated to Professor Westphal, affords a general view of the nervous derangements which may ensue, not from direct injury, either central or peripheral, to the nervous system, but as the effect of shock in its widest sense. The author hopes that it will aid the physician both scientifically and forensically in this difficult branch of medicine, and with this aim the work is written with a practical view. Its chief feature is the very interesting series of thirty-three carefully reported (selected) cases of traumatic neurosis, which occupy nearly half the work (in smaller type than the rest). A few remarks, from the Introduction, will enable the reader to follow the change of ideas which has lately taken place with regard to this subject.

Formerly the prevalent idea was that a chronic myelitis, or a chronic spinal meningitis, or both together, resulted after a severe general concussion of the body. This theory, which has been abandoned, gave rise to the term 'railway spine,' an expression which proved an impediment to a better knowledge. Erichsen first thoroughly described the 'railway spine,' but his symptomatology, which laid the foundation for the modern study of shock although his theory was wrong, was by no means confined to railway cases, which formed only the minority of his cases. His views were widely adopted, amongst others by Leyden and Erb, but were also early and vigorously opposed (Syme, Savory, Morris). Even as late as 1879, Rigler

(*Ueber die Folgen der Verletzungen auf Eisenbahnen, &c.*, Berlin) postulates the existence of a chronic myelitis in nearly all his cases.

The prevailing theory at the present moment is that traumatic neuroses have their seat in the higher centres of the brain, and are of psychic origin. In 1881, Moeli developed this idea with great ability, though his cases were few. Thus a transition was effected between the milder effects of shock, and traumatic insanity as studied by Schlager, Skae, and Krafft-Ebing. Hodges (Boston) made an advance by treating some forms of neurosis and hysteria as the effects of shock. But the observations of sensory anæsthesias by Wilk, Walton, Putnam, Thomsen, and Oppenheim, first clearly indicated the cerebral origin of these affections after shock, and their functional character. Charcot rendered the greatest services in the last respect, but at first regarded all so-called railway cases as purely hysterical, while extending the meaning of this term. For Charcot showed that the derangements met with after various accidents were due not to direct injury, but to emotion, to the idea of the accident, and he did this experimentally by producing at will the same derangements in hypnotised persons by suggestion. After an accident the patient's mental condition stands for the hypnosis, and he furnishes his own 'suggestion' ('psychic condition' and 'auto-suggestion'). Page had previously developed a similar theory of this subject. Charcot has lately modified his opinion, and allows that all the symptoms after a general shock cannot be classed as hysterical. This is the origin of the term 'railway brain' *vice* 'railway spine,' and the author was the first to sketch the brain symptoms.

The accidents were of various kinds, a few only being of railway origin; and, as a rule, the fright was great and the hurt small. As a fact, traumatic neurosis is rare after a severe injury, such as a fractured limb, and this struck Erichsen. A great many of the patients sought help at the hospital for their condition, without any idea of obtaining damages; and it was their interest to get well as soon as possible, not to remain ill. The chapter on the Symptomatology is the chief one in the book. Temporary insanity from fright is discussed as being rare, but many authors consider it frequent after severe fright, especially when a large number of people are affected at once. The symptoms of 'traumatic neurosis' may not appear for weeks, or even months, after the accident, and are at first purely subjective; but, as a rule, they set in after a few hours or days. These symptoms have been already reported in a leading article in the LONDON MEDICAL RECORDER, April 20, 1888, and do not require repetition here.

This work forms a most valuable addition to our repertory of knowledge on the subject of shock, and its cases especially will repay a careful study, such as Dr. Oppenheim's papers in general have already received in America. It is noteworthy that in very few of the cases described was there any inherited neuropathic disposition, and the patients had been in good health prior to their several accidents; but alcoholism was found of potent influence in assisting the development of traumatic neurosis; indeed, alcoholism alone may produce similar forms of neurosis. The prognosis as regards perfect cure is never very favourable. The patient retains a nervous weakness and a morbid irritability in most cases.

In the chapter headed 'Forensic Observations' an attempt is made to grapple with the difficulties of the subject—viz., How far a man who is the subject of a traumatic neurosis is fit for work, and the grave question of simulation is discussed. The indications of the latter are necessarily somewhat vague.

E. J. EDWARDES, M.D.

NOTES ON BOOKS.

ARTICLE 1330.

A New Contribution to the History and Etiology of Spondylolisthesis. By FRANZ LUDWIG NEUGEBAUER, M.D., of Warsaw. Translated by FANCOURT BARNES, M.D., Physician to the Chelsea Hospital for Women, &c. (Selected Monographs: New Sydenham Society, 1888.)

DR. NEUGEBAUER has devoted much time and labour to a rare but important form of pelvic deformity. His work being originally written in a foreign tongue, many British obstetricians will feel indebted to the translator. The text includes minute descriptions of specimens and much scientific argument, requiring more than an ordinary degree of scholarship to be comprehensible to the English reader should he attempt to study the work in its native garb. The author demonstrated his theories in this country a few years ago, and much information of a practical nature pertaining to the subject of spondylolisthesis is to be found in the twenty-sixth volume of the *Transactions of the Obstetrical Society of London.* In that volume is a report on Dr. Neugebauer's specimens and drawings exhibited before the society, and a further description of a specimen of the deformity in the Museum of St. Thomas's Hospital. Nevertheless, the full work of Dr. Neugebauer was much needed, and that want is now supplied. The author's special theory, as all who have studied the subject must be aware, attributes spondylolisthesis to defective development of the fifth lumbar vertebra, or to fracture of its arch, or of the sacral articular processes, under certain conditions, which the author explains. The vertebra is dislocated forwards, carrying with it the vertebræ immediately above. Hence the conjugate diameter of the brim of the pelvis is made unusually narrow. Dr. Neugebauer calls on all who make surgical necropsies to look out for the early stages of spondylolisthesis in all cases of injury from falling.

ALBAN DORAN.

ARTICLE 1331.

THE *Suggestions for a Plan of Taking Notes of Medical Cases*, arranged by GEORGE F. DUFFEY, M.D. (Fannin & Co.), consist of lists of the main points to be remarked upon in the examination of a patient. As they are all contained on a small sheet of paper, the student will doubtless find them very convenient to carry about with him. Even practitioners may be occasionally glad of the opportunity of ensuring the completeness of their notes in obscure cases, or in cases destined for publication.

THE Gamble prize medal has been awarded to Miss Marion Greenwood, certificated student of Girton College, for an essay on 'The Digestive Process in certain Simple Organisms—Amœba, Actinosphærium, and Hydra.'

DIETETIC PREPARATIONS.

SPARKLING WINES.

The Wines of Saumur.

In closing our remarks on sparkling wines as adapted to the purposes of the medical man, we desire to record the results of our tests and analysis with the wines of Messrs. de Neuville & Co., of Saumur. Their bouquet and elegance surpass that of many much higher priced wines coming from the Epernay and Rheims districts. Were it not for the prejudice against Saumur champagnes, these wines, on their intrinsic merits, would be equally esteemed. When the public drink inferior cheap wine it is condemned, and more often than not classed as 'that nasty Saumur champagne.'

These wines contain a little more saccharine matter than some we have recommended, but the extra dry is well adapted for invalid use. The firm, however, ship a 'brut' wine which contains a still smaller proportion of sugar; this in many cases would be preferable.

Our analyst states as the result of his analysis that the wines are of excellent quality and perfectly genuine, with more bouquet than any other Saumurs examined. The extra dry is especially suitable for invalids and the dry for general drinking. The results of those analysed are given below, and they can be had at the stores at 34*s*. per bottles :—

	Extra Dry. R. 1884.	Dry. R. 1884.
Specific gravity at 60° F. ...	1004·9	1009·5
Absolute alcohol, by weight	10·92 %	10·46 %
Equal to proof spirit	23·70 ,,	22·71 ,,
Glucose	3·78 %	4·81 %
Extractives, &c.	1·02 ,,	1·29 ,,
Ash	·16 ,,	·14 ,,
Total solids	4·96 ,,	6·24 ,,
Acidity calculated as Acetic Acid	·60 %	·58 %

NEW REMEDIES.

CASCARA SAGRADA.

The consumption of Cascara Sagrada has been so large that there is at present a great dearth of the genuine bark. Even the inferior varieties, adulterated with spurious barks, which are offered in the open market, have greatly advanced in price, and advices from the habitat of Cascara Sagrada state positively that no more of the genuine bark will be obtainable until next fall. The undoubted result of this scarcity will be to flood the market with many inferior and medicinally inert preparations of the drug.

Messrs. Parke, Davis, & Co., however, state that they have never relied for supplies of Cascara Sagrada on the inferior article offered in the open market, but in accordance with their usual methods take every precaution to obtain supplies from reliable sources. They inform us that they have now on hand a large sample stock of the genuine best quality Rhamnus Purshiana; they will not take advantage of the market and raise the price, but will continue to supply only the highest quality preparations of the drug at regular price. It is believed that physicians, in view of the facts stated, and of the special knowledge of Cascara Sagrada possessed by this house obtained by long and careful study of its properties and manufacture, will see the propriety of specifying only Cascara Sagrada of Parke, Davis, & Co.'s manufacture.

The agents for England, Messrs. Burgoyne, Burbidges, Cyriax, & Farries, 16 Coleman Street, E.C., will be pleased to supply preparations of Cascara Sagrada of Parke, Davis, & Co.'s manufacture.

MISCELLANY.

In the current number of the *Glasgow Medical Journal* Dr. Anderson writes :—From time immemorial the practice of massage has been known to the Fijians, from whom the Samoans first, and then the Tongans, learned the art. The process consists in rubbing and kneading the part, the operation being sometimes continued for hours ; it stimulates the circulation and relieves pain, and is commonly used in abdominal disease. The native doctors have great faith in massage, and it is always practised by them.

It is reported that several fatal cases of blood-poisoning have occurred recently amongst the Paris medical students practising in the dissecting room of the École Pratique. It appears that, in consequence of a decree of the Municipal Council, surviving relatives, who formerly paid a fee of 7 frs. to have the bodies of those dying in hospitals, can now receive them gratis. The dearth of subjects which is the result of this change has led to greater putrefaction than usual, and an arrangement is now being made for the sending of bodies from Lyons and other large cities.

A recent change in French sanitary legislation of some medical importance has been recently made. The French sanitary department formerly simply served to enforce the observance of measures for preventing the propagation of epizootic diseases, and was naturally attached to the Ministry of Commerce; but now French sanitation takes a wider range, and this department is attached to the French Assistance Publique. M. Monod, the director of the Assistance Publique, has made his mark as a wise and energetic sanitarian, and the Government shows wisdom in amalgamating the two departments under the title of Health Service and appointing M. Monod as the director of both services. A new sanitary era throughout France may now be confidently expected. Sanitary scandals, of which there are a plentiful crop in Paris alone, will not be allowed to thrive and endanger life. M. Monod has given more than one proof of his ability as a sanitarian, and his energy as a public officer, and this combination of qualities especially fit him to undertake the increased important duties which now devolve on him as director of the Health Service of France.

THE MEDICAL SOCIETY OF LONDON.

11 Chandos Street, Cavendish Square, W.

Session 1888-89.

The remaining Lettsomian Lectures will be delivered by W. R. Gowers, M.D., F.R.S., on Jan. 21 and Feb. 4, 1889, at 8.30 P.M. Subject—'Syphilis and the Nervous System.'

LECTURE II.—January 21.

The Symptoms of Syphilitic Lesions considered in connection with General Methods of Diagnosis and certain Special Diagnostic Problems.

LECTURE III.—February 4.

The Elements of Prognosis—Special and unsettled Points in Treatment.

Bernard Pitts, } *Hon. Secs.*
C. E. Beevor, }

The London Medical Recorder.

Article 1332.

SEDGWICK ON CHOLERA AND CHEMISTRY.*

The influence of chemistry on medical science has seldom, if ever, failed to lead to satisfactory results when the attempted progress has been strictly limited to the high road of chemical analysis, and when the by-ways of chemical assumption have been resolutely shunned; for, if the mind has been previously unbiassed by chemical assumptions, there can be no doubt that the evidence supplied by chemical analysis may be safely relied on in the scientific investigation of disease. When, for example, the medical profession had fully recognised this great fact that prolonged suppression of urine could occur during choleraic collapse without being followed by any symptoms of uræmic poisoning, it was for many years assumed that urea continued to be formed, and that it was vicariously disposed of in the flux from the stomach and bowels. When, later on, and in accordance with the unimpeachable evidence of chemical analysis, it had been admitted that the absence of uræmic poisoning in cholera is due to the arrested formation of urea, the tendency to wander off into the by-ways of chemical assumption appears to have been too strong to be resisted. For, although it had been clearly demonstrated that this prolonged suppression of urine without symptoms of uræmic poisoning is met with in a very large number, and in a very large variety, of cases in which there is collapse closely analogous to that of cholera, and in which there could be no specific blood-poison capable, as was alleged in the case of cholera, of shutting off the blood from access to air in the lungs, yet the same tendency to substitute chemical assumption for facts which not only could be, but which had been, demonstrated by chemical analysis, was still too strong to be withstood.

The effect of the tendency in this case was to lead to what may be referred to as one of the most remarkable series of assumptions in the history of medical science; for, in order to explain an alleged deficiency in the supply of oxygen to the blood, it was assumed that there was a blood-poison, which was supposed to produce morbid contraction of the pulmonary arterioles, and that, in consequence of such contraction, the aeration of the blood was checked. It was not until nearly two years after the production of my paper on the 'Chemical Pathology of Respiration in Cholera,' in which M. Doyère's analyses were for the first time made fully known to the medical profession in this country, that the author of this theory referred to the evidence of anyone who had chemically analysed the expired air, and who had consequently been able to demonstrate that the proportion of oxygen absorbed in typical cases of cholera collapse, instead of being relatively less, is, on the contrary, always in excess of the carbonic acid eliminated. He has since admitted, shortly before the close of the year 1887, that, as regards the pulmonary interchange of gases during collapse, there 'is a more or less considerable diminution of the amount of carbonic acid exhaled, in proportion to the volume of oxygen absorbed by the blood.' This admission, which has been long delayed, is irreconcilable with the theory of defective oxygenation of the blood resulting from the specific effect of a blood-poison; and, although it has been suggested that 'these exact observations (of M. Doyère) indicate that abnormal chemical changes take place in the blood and tissues of cholera patients,' and that 'a portion of the oxygen enters into combination with some abnormal products, forming compounds which, as it were, take the place of carbonic acid,' yet they are as much without any analytical evidence in their favour as was this author's previous assumption, which theoretically connected the arrested formation of the chief constituents of bile and urine with a relative deficiency of oxygen in the blood. It is reassuring to find that the tendency to indulge in such assumptions is less common in physiology than it is in medicine; and, in consequence, it is now a fully-recognised as well as a firmly-established fact that there is always a relative excess of oxygen absorbed in cases, for example, of hibernation, of abstinence from food, and of other physiological conditions of the system, in which, as in cholera, the production of carbonic acid for elimination has been reduced.

It was in the year 1856 that I thought it advisable, in my first publication on cholera, to refer to the nature and extent of those changes, which I stated might be grouped together under the title of the 'Chemistry of Respiration in Cholera.' 'The supposition,' I proceeded to add, 'that the dark colour of cholera blood is owing to a deficiency in the supply of oxygen to the lungs has always been a favourite way of accounting not only for the dark colour of the blood, but for most of the other phenomena in colour. . . . There is, however, no satisfactory evidence to show either a deficiency of oxygen or an excess of carbonic acid in the blood of cholera patients during collapse; and, as there is no mechanical obstacle to the free entrance of air by the lungs, and as the inhalation of even pure oxygen is attended with no improvement, it may be inferred that, so far from a deficiency of the one or an excess of the other occurring in cholera, their relative proportion is always maintained during collapse, except in those cases in which the condition (collapse) of the lungs after death may appear to justify the inference that the amount of carbonic acid in the blood is relatively diminished, and oxygen therefore present in slight excess.' The inference thus cautiously drawn from clinical and pathological observation of the disease, as far back as thirty-three years ago, has been fully confirmed by chemical analysis, which has demonstrated that when the amount of carbonic acid produced for elimination is reduced the oxygen is therefore increased.

During the discussion on cholera at the Royal Medical and Chirurgical Society, in March 1885, I ventured to express my regret that so little should even then be known in this country about the chemistry of respiration in cholera; and I urgently directed attention to M. Doyère's important work on the chemical analysis of the expired air in this disease. Nothing more, however, was said or done with reference to this subject until I had brought forward my paper on the 'Chemical Pathology of Respiration in Cholera,' which was read early in the following year, and which was subsequently published in the *Transactions* of that Society. It is almost needless for me to add that this paper failed to elicit any discussion when it was read on April 13, 1886, for it was necessarily bound to fail where nothing was apparently known about the chemical analysis of air expired during collapse. But all that was needed for the paper itself and all that I expected on its behalf was that it should later on appear under favourable auspices in print; and, having so appeared, it has served the purpose for which it was written by showing how completely without any trustworthy evidence in its favour is the long-cherished and the influentially-supported theory which is based on defective oxygenation of the blood.

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* Abstract of the Presidential Address delivered at the fifty-eighth Annual Meeting of the Harveian Society, Jan. 17, 1889, by William Sedgwick, M.R.C.S. Eng.

The general truth of the Linnean adage, 'Natura non facit saltus,' has been well illustrated by much that is both directly and indirectly connected with the great function of respiration in cholera. When, for example, the blood, as is the case during choleraic collapse, is surcharged in the lungs with oxygen, it is found that the respiration has undergone a very important change; for, in connection with such increased arterialisation of the blood, it has been observed that the inspiration is much prolonged, instead of being, as it normally should be, shorter than expiration. When the inspiration, which in these cases is often twice as long as the expiration, is at its height, it has been usually observed that the respiration stops, so that a distinctly apnœic pause occurs before the short and quickened expiration is made. There is, however, nothing in such changes which can in any respect be looked upon as distinctive, or characteristic, either of cholera or even of disease; since the same results are physiologically produced whenever the inspirations are either voluntarily or artificially prolonged. If, for example, a person takes a series of rapid and deep inspirations, the blood becomes surcharged with oxygen, and long apnœic pauses ensue; and it has been, from a comparatively early period, more or less well known that the same effect can be artificially produced in animals by vigorously and rapidly forcing air into their lungs, when, in like manner, over-arterialisation of the blood occurs. It must, therefore, be evident to all who may have been able to bring physiological knowledge to aid them in their clinical investigation of this disease, that the remarkable prolongation of the inspiration during collapse, which is followed by an apnœic pause before the expiration is made, shows that a relative excess of oxygen has been exchanged for a reduced amount of carbonic acid in the lungs. For it would have been physiologically impossible for any corresponding prolongation of the inspiration to have occurred if it could have been demonstrated by chemical analysis of the expired air that a relative deficiency, instead of a relative excess, of oxygen had been supplied to the pulmonary blood. In further illustration of this part of the subject it is necessary to add that although, as I have elsewhere had occasion to state, the lungs in cholera are comparatively free from disease, yet it has occasionally, and sometimes not infrequently, been observed that emphysema has resulted from this remarkable prolongation of the inspiration during collapse. The emphysema which is thus liable to occur during choleraic collapse, is the physical result of an exceptional prolongation of the inspiration, which leads to over-distension and rupture of the air-vesicles. The tendency to rupture in such cases as these, in which there is prolonged and recurring over-distension with air, is greatly favoured by the reduction in the amount of blood which is sent to the lungs for aëration, and which is so much reduced during collapse that Professor Griesinger has been able to demonstrate that the area of cardiac dulness is less than the normal extent, and that consequently the blood in the pulmonary artery and its branches is comparatively very small in amount. There should, therefore, be very little, if any, difficulty in recognising the fact that when the air-vesicles, which expand with each normal inspiration, have been exceptionally distended in consequence of the inspiration having been exceptionally prolonged; and that when, at the same time, they have been to a great extent deprived of that soft and much-needed support which only blood in the pulmonary capillaries could give, there must be a great and a long-recurring tendency in their yielding and bulged parietes to burst.

It is now fairly well acknowledged that, as regards the natural history of disease, it behoves us from time to time not simply to take stock of the knowledge we possess, but also to test its value; for, unless some efforts are occasionally made to separate, as it were, the corn from the chaff, many false facts in connection with false theories of disease would continue to occupy the place of much that is important and capable of being well proved in medical science. It has been chiefly through the influence of chemistry on the scientific investigation of cholera that many false facts, as well as false theories, have been swept away, and, in consequence of the clearance which has been thus effected, it has become possible for us to recognise the true nature of the disease. But we must not too hastily allow ourselves to suppose that, because something more is now known about cholera than was formerly the case, it has become more easy to discover its true cause, or to undertake, with any increased confidence, its treatment. There is a very noticeable agreement in the results obtained from its clinical, its chemical, and its pathological investigation, which unmistakably indicates that cholera is due to a central arrest of nutrition, and which has been fully confirmed by biological research. Notwithstanding, however, the great advance which has been made in our knowledge of the nature of the disease, the problem of its cure, like that of its cause, remains unsolved. Although we are thus compelled to take what, it must be admitted, is a very gloomy view of the nature of the disease, yet there is much that may, notwithstanding, be regarded as hopeful in some of the results of its scientific investigation. For we have been enabled, and especially through the influence of chemistry, to recognise more fully than would otherwise have been possible, the greatly increased efforts which have been made by the curative power of nature to maintain life when, to the superficial observer, the tendency to death appears to be most marked. In one of the numerous cases cited in my now well-known paper on the 'Chemical Pathology of Respiration in Cholera,' it was analytically proved, during some hours of well-marked collapse, that whilst the average quantity of carbonic acid eliminated from the lungs was only 37 per cent., the average quantity of oxygen absorbed was 54 per cent. of the normal amount, and that when the final analysis of the expired air was made one hour and ten minutes before death, and when the cyanosis was strongly marked, the carbonic acid eliminated was only 5½ per cent., whilst the oxygen absorbed was 29 per cent. of the normal amount, or, in other words, the oxygen absorbed was equal to nearly six times the carbonic acid eliminated. No evidence could be more conclusive than this, for it proved that the comparatively large amount of oxygen received by the pulmonary blood in choleraic collapse is due to the exercise of this curative power in Nature, and that during the struggle to avert death oxygen necessarily becomes more and more entitled to be regarded as the breath of life, and that it is admitted as such in relatively increased quantities into the blood through the lungs. But whilst a comparatively large excess of oxygen can be thus abstracted from atmospheric air for the purpose of warding off impending death, it has been experimentally demonstrated that the addition of artificially prepared oxygen to the air for inhalation has very little, if any, influence on the amount absorbed. For it has been fully proved that the relative quantity of this gas which is exchanged for carbonic acid during health is not greater when an excess of such oxygen has been added to the air; and, consequently, all attempts to overcome the collapse of cholera by inhalations of chemically prepared oxygen have signally failed in every outbreak of the disease. This failure is undoubtedly due to the fact that, apart from any necessity there may be for distinguishing between the physiological and the chemical affinity of living structures for oxygen, there is an essential distinction made by the lungs, both in health and in disease, between natural and artificially prepared oxygen; so that whilst the latter is almost, if not altogether, rejected, the former is more or less readily absorbed. The exercise of such power of selection is the more remarkable as it is evident that there must be greatly increasing efforts made during advancing collapse to secure a relative excess of natural oxygen from the impoverished air within the air-vesicles; for such air progressively retains comparatively more carbonic acid and less oxygen than that of the surrounding atmosphere.

In conclusion, it may be remarked that although the influence of chemistry on medical science, as illustrated by cholera, has been very great, it has not as yet been fully recognised. As time, however, goes on, it may be expected that there will be increasing reluctance to accept any theories of disease which are based on chemical assumption, unless they are supported by the evidence of chemical analysis, since it has been clearly demonstrated that one analysis of the expired air is sufficient to disprove all theoretical connection between cholera and defective oxygenation of the blood.

WILLIAM SEDGWICK.

ARTICLE 1333.

ABADIE AND OTHERS ON THE ETIOLOGY OF TETANUS.

THE following is a summary of an interesting letter addressed by Dr. Ch. Abadie to the *Société de Médecine de Paris* on the etiology of tetanus.

Dr. Abadie, who believes that the infectious germ of tetanus may exist in the atmosphere, and that manure is favourable to its development, cites observations by different writers which seem to show that the infection was communicated by germs contained in the atmosphere. M. Richelot reported two cases of tetanus in patients who had undergone ovariotomy. The most rigorous antiseptic measures were employed. The patients had never been near horses, but the day before tetanus declared itself, a large quantity of manure had been spread over the yard of the hospital. The inference is that the emanations from this manure must have contained the pathogenic germs of tetanus. M. Terrillon observed two cases of tetanus consecutive to wounds on the face, inflicted by a horse's hoof which was soiled with manure.

Dr. Abadie draws attention to the fact that if the presence of a horse is not always proved in the cases he quotes, the presence of manure is found in every instance. The author once observed an epidemic of tetanus among a regiment of wounded soldiers. Some of the patients were placed on straw in the village church, and after four or five days the epidemic of tetanus broke out. The soldiers nursed inside the houses of the same village were perfectly free from the affection.

Many careful and accurate experiments prove that the atmosphere may contain the virulent germs of different affections. Amongst others may be mentioned those of M. Cornet (Koch's pupil). M. Cornet states that the inoculations with the atmospheric dust collected in a room inhabited by phthisical patients, who invariably employed spittoons, gave no infection, whereas inoculations with the same dust, taken from rooms inhabited by patients who expectorated on the floor, or into their handkerchiefs, proved virulent in half of the cases in which they were made.

W. VIGNAL.

ARTICLE 1334.

ROMME ON ACETONURIA AND DIABETIC COMA.*

THE author of this graduation thesis commences with a short review of the subject. The connection of acetone with diabetic coma was first suggested in 1857 by Petters, who found acetone in the urine of a patient who had died in this condition. Three years later Kaulich put forward the theory of acetonæmia which has held its ground more or less up to the present day. He gave very little evidence in support of the truth of his views, but contented himself with sketching out a workable hypothesis. It is, however, to Kussmaul, who in 1874 published a treatise on this subject, that we are most indebted for bringing it prominently before the notice of the profession. So much so, indeed, that the special condition is often termed Kussmaul's coma. Kussmaul was particularly struck by the peculiar character of the respiratory rhythm. The respiration, he says, consists of deep and rapid inspiration and expiration, such as can only result from some direct stimulation of the respiratory centre in the bulb. Kussmaul showed that neither in uræmic coma nor in the terminal stage of cholera does the respiration present the same peculiar rhythm as in diabetic coma. It cannot be due to carbonic acid, for the hæmoglobin continues to be well oxygenated. There remains, then, the substance discovered by

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* *Contribution à l'Étude de l'Acétonurie et du Coma Diabétique. Par le Docteur Romme de la Faculté de Paris.* Paris. 1888.

Petters—namely, acetone. Kussmaul undertook some experiments on animals, and found that in them acetone was capable of producing all the symptoms of diabetic coma. But he was struck with the fact that acetone could be administered to human beings in doses of 4-6 grammes daily for many days without any apparent ill effects. He came to the conclusion that there existed a similar relation between acetonæmia and diabetic coma to that between alcoholism and delirium tremens.

In 1883 Frerichs published a treatise on the subject, giving details of thirty cases, and concluded by totally rejecting the theory of acetonæmia, and chiefly on the following grounds. First, that acetone may be given to animals in large doses without ill effects, and that it then cannot be traced in the urine.

And, secondly, he rejects Kussmaul's theory of a chronic intoxication on the ground that acetonuria is only associated with the period of diabetic coma and does not exist as a chronic condition. The latter proposition is an error due either to imperfect tests or want of observation, and the former statement has since been amply disproved, the toxic properties of acetone having been established by numerous physiologists beyond the possibility of dispute.

The urine was tested for acetone in all the thirty cases with perchloride of iron, and the red coloration was obtained in twenty-eight. Perchloride of iron, however, is not a test for acetone, but for diacetic acid, to which Frerichs likewise attributed no importance in the production of coma.

There has been much difference of opinion as to what other conditions lead to the presence of acetone in the urine; some maintaining that it is normally present in very small quantity, and that a much more considerable amount is constantly present during pyrexia. This difference of opinion has been shown to be due to the imperfection of the tests employed, some of which give the reaction also with alcohol, and some with several other substances.

A reliable test seems now to have been found in Chantard's reagent, which consists of a solution of fuchsine, 1 : 2,000, into which a current of sulphurous acid gas is passed. The liquid is rapidly decolorised, and assumes a clear yellow tint, which is permanent and unaffected by an excess of acid. A few drops added to a liquid containing acetone produce a deep violet coloration. It will detect 1 part of acetone in 1,000. Perchloride of iron, as mentioned above, is not a test for acetone, but for diacetic acid. This acid was discovered by Gerhard. It is very unstable, and readily splits up into acetone, alcohol, and carbonic acid.

With the aid of Chantard's reagent Dr. Romme has shown that acetone is not normally present in the urine, and that it is not found in moderate pyrexia, but only when the temperature remains persistently above 104°. The previous erroneous statement on this point was due to the fact that Lieben's reagent is reduced by alcohol as well as by acetone. Dr. Romme has further shown that acetone is constantly present in the urine in the great majority of cases of diabetes at all times, and not only during the comatose condition. It is usually accompanied by diacetic and oxybutyric acids. These are chiefly harmful as stages in the production of acetone, but they may also exert a deleterious influence simply from their acid reaction. In the majority of cases of diabetic coma degenerative lesions will be found in the kidneys. These changes have been described by Ebstein. Dr. Romme's investigations have shown that in diabetes acetonuria is more or less constant. When the kidney degeneration has proceeded far enough to materially interfere with this continuous excretion of acetone, the latter accumulates in the body and produces acetonæmia, or acetone intoxication, the symptoms of which are those of diabetic coma.

The parts played by diacetic acid and by oxybutyric acid are uncertain, but it is probable that they act chiefly as acetone-formers, though they may have some individual action too, when the varying proportions in which they are present would explain some of the variations in different cases of diabetic coma.

H. Handford, M.D.

Article 1335.

ERB ON ACROMEGALIA.[*]

Observation of a new case of acromegalia (in a woman aged 58) has given the author occasion to collect the eleven hitherto described cases of this rare disease, and classify the characteristics, or rather the chief features.

Symptoms and course.—The disease develops insidiously mostly in early adult life, in either sex, with various symptoms—*e.g.* parasthesiæ, pains, feeling of weariness in the limbs, headache, giddiness, &c. The feet and hands soon begin to appear larger, plumper, more unshapen. Their joints are enlarged, and the leg and fore-arm share in the enlargement, while the more proximal parts of the limbs are spared. The paw-like development of the gigantic hands is characteristic, with the thick curved fingers, and the broad, furrowed nails. The legs appear as in elephantiasis, and the feet and toes are gigantic, like the hands. The face soon alters likewise, the nose is bigger, the swollen lower lip hangs down, the lower jaw projects, and the swollen tongue becomes an impediment to speech. The face is more oval. The attitude is somewhat stooping, owing to alterations in the spinal column. The disease advances steadily for a few years, and then remains stationary, or only advances very slowly. Examination easily shows that the bones are the chief parts affected, the skin and subcutaneous tissue only participating in a secondary degree; that there is no œdema, no myxœdema, and no elephantiasis, and that the sensibility and motility, the reflexes, and the mental functions, are not much affected. The internal organs show no great individual alteration, but there is an assemblage of conditions that merits enumeration—viz., cardiac enlargement with asthmatic symptoms, albuminuria, polyuria, atrophy or enlargement or abscesses of the thyroid body, dulness of the anterior sternal region (enlarged thymus), and cerebral symptoms (headaches, mental weakness, disturbance of vision from compression and atrophy of the optic nerve, perhaps from enlargement of the hypophysis). The above conditions may not be all present at the same time. The disease may vary greatly in the mode and extent of invasion, and a very different appearance is presented, according to the part attacked. The course also varies; the disease may be stationary for decades, and the patient may continue to work; or death may ensue from disease, which may be independent of the complications which seem to share in the acromegalie process more or less, as above enumerated.

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[*] Professor W. Erb, of Heidelberg, on Acromegalia (morbid giant-growth). (*Deutsche med. Zeitung*, 1888, No. 85.)

The *diagnosis* is easy in pronounced cases, but certain diseases may resemble acromegalia. In elephantiasis, the thickening affects only the skin and subjacent tissue; in myxœdema the skin is much swollen without being œdematous, the face wears a more stupid expression and is rounder than before ('full-moon face'), the speech is altered, and the mind is blunted; in leontiasis ossea, the skull is more affected than the face, and shows irregular masses of bone, while the extremities remain free; in osteitis deformans there is enlargement and incurvation of the long bones, with pain, the skull is more affected than the face, the bone disease is irregular, and the hands and feet are never monstrous; in arthritis deformans there is great pain with deformity, nodular enlargements, and exudation.

The *autopsy*, made in three cases, showed hyperplasia of the various tissues affected, especially the connective tissue, including bone and cartilage, enlargement of the vessels; in various internal organs (liver, spleen, kidneys, heart); hyperplasia of the brain and various nerves, especially sympathetic; constant enlargement of the hypophysis; moderate or great enlargement of the thyroid; and persistence or hyperplasia of the thymus.

Etiology.—The origin of these irritative processes is not known, whether it be from a specific infection, or like rachitis from a chemical irritant due to food, or from 'internal irritation,' *e.g.* trophoneurotic influences, or the production of some chemical material, or the formation of cells with abnormal plastic energy in some diseased organ. As regards the last hypothesis, Klebs refers us to the thymus gland, and supposes that vascular germs (angioblasts) are sent into the blood. Erb in his three cases found sternal dulness.

A rational *therapeutic* has accordingly not yet been formulated for this disease.

E. J. Edwardes, M.D.

Article 1336.

ENGSTRÖM ON CÆSAREAN SECTION IN FINLAND.

At the meeting of the Medical Society of Finland, Oct. 6, 1888, reported in the December number of the *Finska Läkaresällskapets Handlingar*, Dr. Engström gave an account of the first successful case of Cæsarean section performed in Finland, and showed the mother and child. Dr. Pippingsköld, in congratulating Dr. Engström, could not unreservedly approve of the mode of disinfection. He cited Winter and Steffeck to show that the liquid disinfectant introduced into the vagina by means of an irrigator allows the entrance of air, which necessarily renders disinfection more or less incomplete. Before all the more difficult obstetric operations, Dr. Pippingsköld has adopted the practice of disinfecting the vagina and the parts surrounding the cervix, as well as the part of the fœtus which may be presented. By sight and the use of a Sim's speculum and depressor, he introduces a carbolised solution of gradually increasing strength, or Van Swieten's fluid, followed by a 2-per-cent. carbolic solution. It is important in using this method that the wadding soaked in the liquid disinfectant is placed in contact with all the parts to be disinfected. Dr. Pippingsköld has often remarked that a little time after the febrile temperature has passed 39° C. it again descends to normal, and remains there, although the operation may be delayed some time. Dr. Pippingsköld thinks it is not the diminution of the intra-abdominal pressure caused by the dislocation of the uterus from the abdominal wound which produced in the woman syncope and fainting. He is more inclined to believe that the sudden exposure of the large intra-abdominal surfaces may have produced a reflex shock through excitation of the vagi nerves. The speaker was also of opinion that in sharply tightening the India-rubber band round the uterus (under the fœtus), or by introducing a hand, a cold sponge or instrument, suspension of the action of the heart might be produced. According also to his views, the slight asphyxia of the newly born is only apnœa, the child not yet having experienced a sufficient stimulus to commence respiration. The transitory suspension of the heart's action was thought to be due to the great change of pressure to which the fœtus had become exposed by the cutting of the walls, and the lifting out of the entire maternal structures. The operator seizes with the hand the detached placenta, and compressing it he extracts with a single effort the fœtus and entire appendages. Dr. Pippingsköld remarks that the common abdominal suture, involving not only the cellular tissue and skin, but frequently also the peritoneum, produces a bad cicatrix, allowing troublesome protrusions of the viscera. The speaker recommended both the suture of Koeberlé, and the metallic one, which is by far the simplest, and has been used by Dr. Pippingsköld for some years past. These two sutures always bring together the edges of the aponeuroses of the abdominal muscles which have been cut. Dr. Pippingsköld compared the case presented with another woman also much deformed, in which he had himself successfully performed an operation for closing a rupture of the uterus. In this woman the fistulæ were already produced on the occasion of a difficult labour, which, nevertheless, had been accomplished without instrumental assistance. This patient weighed only 28 kilos, but she had a much larger pelvic space than Dr. Engström's case. Dr. Pippingsköld thought that both patients were the subjects of congenital rickets, with this difference, that in the patient operated on by himself the process of repair had probably begun just before or a little after delivery. He believed that the child delivered by Cæsarean section had congenital rickets as well as the mother, though in a much lesser degree.

W. W. Ireland, M.D.

Article 1337.

RASKÏNA ON BACTERIOLOGY OF MALIGNANT SCARLATINA.

In the *Vratch*, Nos. 37, 39, 41, 42, 43, and 44, 1888, p. 723, Dr. M. A. Raskïna, of St. Petersburg, publishes an important contribution to the pathology of malignant scarlatina, based on her extensive bacterioscopic researches under the guidance of Professor M. I. Afanasïeff. Her materials were obtained from Professor K. A. Rauchfuss's clinic, and consisted (*a*) of twenty-two cases of scarlatina—complicated either with phlegmonous lymphadenitis (seven cases), or with diphtheria (three), purulent inflammation of joints (two), serous synovitis (one), broncho-pneumonia (two), or otorrhœa (seven). During life, blood, aural discharge, pus from lymphatic and articular abscesses, diphtherial pseudo-membranes and coats, were examined, and in fatal cases (six out of twenty-two) parenchymatous viscera and cervical organs; (*b*) in other sixty-four cases referring partly to simple, partly to complicated, scarlet fever, only blood and desquamating cuticle were examined (both microscopically and bacterioscopically). The blood was invariably obtained by puncture from the pulp of a fourth or fifth finger. Leaving on one side all other technical details and the very interesting clinical histories adduced by the author, we may summarise the main outcome of her valuable investigations as follows:—

A. *Results of Clinical Examination.*—1. In twenty out of the twenty-two complicated cases a streptococcus was found. 2. In the pus from lymphatic (glandular) and articular abscesses, the microbe was invariably present alone, that is, in a 'pure culture.' 3. In otorrhœal purulent discharge, the streptococcus was often seen in association with the staphylococcus aureus and albus, the latter occurring in later stages of the disease more commonly than in the earlier. 4. In pyæmia the streptococcus was frequently accompanied by other micro-organisms of various non-pyogenic species; in one case, however, no streptococcus, but the micrococcus pyogenes tenuis alone was present. 5. In scarlatinal blood the streptococcus could be detected comparatively seldom, which circumstance, however, appeared to depend simply upon the microbe rapidly disappearing from the blood (since in some cases where its presence had been clearly demonstrated, examination on the next day gave negative results). 6. In diphtherial deposits the streptococcus was invariably met with, but always in association with microbes of other kinds. 7. In broncho-pneumonic foci it was present in the state of 'a pure cultivation.'

B. *Morphology and Biology of the Streptococcus.* 1. When obtained from a lymphadenitic pus, the microbe represents rather long chains consisting of from 15 to 20 mostly globular and equal-sized cocci. 2. In otorrhœal pus it always forms short chains lying either within pus-corpuscles or scattered between them. In the former case the chains are made usually of 3 or 4 links, in the latter of about 6. 3. In articular pus the microbe occurs similarly in the shape of short chains (with 3, 4, or 5 links), and is stained (after Gram's method) rather badly. 4. In diphtherial deposits the chains are also short, and arranged in small heaps. 5. In artificial 'pure cultures' the streptococcus presents considerable variations in regard both to the arrangement of the cocci, and their shape and size. In one and the same culture (especially when grown on meat peptone jelly) there are found beautiful chains consisting of perfectly globular, equal-sized, and regularly-arranged links, and, side by side with them, chains with cocci of strikingly unequal size and irregular arrangement and shape. On the whole, however, it may be said that cultures obtained from pus give relatively thick, dark, and regularly sized and shaped chains, while those from diphtherial deposits and broncho-pneumonic foci furnish mostly thin and pale ones. 6. The growth of the microbe is fairly rapid. On meat peptone agar, kept at 37° C., there are seen, even after eighteen hours, minute circular or slightly oval dark grey colonies with uneven edges; later on, they slightly increase in size, and assume a dark brown colour. On gelatine, at the ordinary chamber temperature, the growth is rather slow, the colonies being still more minute. In a test-tube with jelly, the growth proceeds along the whole inoculation (puncture) line in the shape of a thin, flattened cone. The most luxuriant growth is observed on milk albuminate agar, where there is rapidly formed a very wide strip along the needle track, and in meat peptone broth, where, even after twenty-four hours, there may be found a profuse deposit at the bottom of the tube. On shaking the tube, the broth becomes uniformly turbid. If the culture be dead, the bottom deposit does not give, on shaking, an equal turbidity, but breaks into small-sized, firm, as if filmy, flocci. [The phenomenon is said to be so constant as to constitute a reliable criterion for determining whether the culture given still retains its vitality, or is already lifeless.] The above-mentioned facts show that Raskina's streptococcus does not present any essentially different features in comparison with the streptococcus pyogenes and that of erysipelas. The author adds, however, that her microbe is strikingly shortlived, and that its life-duration considerably varies in various cases, the longest term being a month, the shortest three days. The agar cultures are generally by far more stable (from ten to thirty days) than the bouillon ones (from three to five). [Meanwhile, according to Dr. I. I. Mëërovitch, cultures of the erysipelatoid streptococcus preserve their vitality for four or five months. *Vide* the LONDON MEDICAL RECORDER, November 1888, p. 471.—*Rep.*] 8. To elucidate the action of the streptococcus on the animal system the author made twenty inoculation experiments on rabbits. Only five gave positive results, to wit, in two a hypodermic injection of a very large quantity of the culture gave rise to a local suppuration; three animals died from septicæmia (2), or broncho-pneumonia (1). In none could erysipelas be induced; neither did the inoculation on the conjunctiva produce any pathogenic effects.

C. *Some Theoretical Considerations.*—Analysing her results, and confronting them with exceedingly contradictory statements of her predecessors (that is, all other workers on pathogenic streptococci; who are—MM. Afanasïeff, Auspitz, Babés, Banti, Baumgarten, Besser, Biondi, Bonome, Brieger, Charrin, Crookshank, Denuée, Doleris, Eiselsberg, Emmerich, Fehleisen, Fluegge, Fraenkel, Garré, Guarnerri, Guttmann, Hacksinger, Hajek, Hoffa, Hueppe, Kitt, E. Klein, Kolisko, Kossowitz, Kranzfeld, Krause, Loeffler, Mëërovitch, Neumann, Nicolaier, V. Noorden, Ogston, Passet, Pasteur, Pavlovsky, Pfeiffer, Rindfleisch, Rosenbach, Saenger, Smith [? *Rep.*], Thaon, Tilanus, Vysokovitch, Watson Cheyne, Weichselbaum, Widmark), Dr. Raskïna comes to the following conclusions, which, she thinks, may bring an admirable harmony into the streptococcus chaos. 1. All streptococci found in various diseases, the S. of erysipelas, S. pyogenes, and her S. of malignant scarlatinal complications, constitute in reality one and the same species of micro-organisms, which is liable to undergo certain morphological and biological variations depending upon varying outer conditions of the growth and life. As is well known, properties of artificial cultivation-media manifest a marked influence on the duration of life and virulence of pathogenic microbes in general. Thus, the virulence of the bacillus of anthrax may be considerably increased by the addition of lactic acid to the medium, while that of the pneumonic diplococcus may be decreased by the same chemical substance. Ogston's pyogenic bacteria become more virulent when grown on egg-albumen, &c., &c. It is known as well that also natural media—that is, the organisms of various animals—may give rise to similar differences in various properties of pathogenic microbes (thus, the bacillus of swine erythema becomes less virulent after its having passed through a rabbit's system, and more virulent after its passage through a pigeon's organism. According to Huber, the anthrax bacillus obtained from a guinea-pig is thicker than that from mice or sheep, &c., &c.). It is just possible, too, that similar differences may be determined by individual tissues in one and the same animal organism, as well as by the occurrence of various alterations in one and the same tissue in consequence of various morbid processes. 'One may very naturally expect that a streptococcus growing in the skin in erysipelas should differ in the degree of virulence, duration of life, &c., from a streptococcus occurring in pus of an inflamed subcutaneous cellular tissue; while the latter coccus should similarly differ from a microbe of the same species living in a diphtherial pseudo-membrane or in a broncho-pneumonic focus, &c.' 2. Certain peculiarities presented by the streptococcus occurring in complicated or malignant scarlatina, in comparison with streptococci of other diseases, may be easily explained; *a.* by the fact that the microbe here invades a soil already primarily altered or prepared by another pathogenic microbe (by the still unknown specific microbe of scarlatina); that is, the streptococcus finds the patient's tissues already weakened, exhausted, and hence offering a less energetic resistance to its inroad and thriving; and (*b*) by the symbiosis of the two pathogenic microbes. It looks very probable that the scarlatinal micro-organism elaborates some chemical substance which promotes the growth of the streptococcus, intensifies its virulence, and thus makes the coccus more malignant in its action in this than in other morbid states.

D. General Conclusions.—1. Such malignant complications of scarlet fever as inflammation and suppuration of the submaxillary lymphatic glands, cervical phlegmon, aural inflammations, suppurative inflammation of joints, and pyæmia are beyond any doubt caused by a secondary infection of the patient's system by the streptococcus. 2. The same may be asserted probably also in regard to diphtheria and serous synovitis complicating scarlatina. 3. In aural complications the staphylococcus, and in pyæmia the micrococcus pyogenes tenuis, may sometimes play a pathogenic part side by side with the streptococcus. 4. The latter penetrates into the system of the patient through his fauces, already affected by the scarlatinal process, and then spreads on along the lymphatic tracts. 5. The peculiar liability of the scarlatinal patient to the streptococcus infection may be attributed to the combination of the two conditions:—(*a*) the microbes having a tendency to spread along the lymphatic tracts, and (*b*) an extreme abundance of the fauces (the inoculation region) in lymphatic structures. 6. Having penetrated into the patient's circulation, the streptococci may—(*a*) either rapidly perish, and then disappear without having succeeded in causing any marked systemic alterations beyond fever; or (*b*) may be deposited by the blood-current in various organs, to rapidly multiply therein, and to cause the patient's death before any local changes have developed; or (*c*) may cause fatal pyæmia with metastatic abscesses. 7. The streptococcus of malignant scarlet fever does not present any essential differences in any respect in comparison with other streptococci yet described in international literature. 8. The streptococcus has no direct relation to the pathogenesis of scarlatina, since—(*a*) it is never seen in blood or organs of patients suffering from a simple or uncomplicated scarlatina; (*b*) it is but very rarely met with in desquamating cuticle (in two out of eighteen); (*c*) inoculation experiments give on the whole the same results as the inoculation of other streptococci, but never give rise to scarlatina. 9. Bearing in view the fact that the pathogenic microbe of malignant complications of scarlatina penetrates into the patient's organism through the fauces, it is imperatively necessary to keep up an utmost cleanliness of the patient's oral cavities and fauces, as well as of all objects coming in contact with the parts.

V. Idelson, M.D.

Article 1338.

SANDWITH ON THE CAIRO LUNATIC ASYLUM.

In the *Journal of Mental Science*, January 1889, appears an article on the Cairo Lunatic Asylum by Dr. Sandwith, Hon. Physician Kasr el Aini Hospital. According to Makrizy, the Arabian historian, a hospital for the treatment of the insane, as well as of other diseases, was built in A.D. 1278 by the Mamaluke Sultan Kalaoon. The hospital was apparently well endowed, and considerable attention paid to the patients, as well as to teaching different subjects to students. Other historians relate that each patient had two attendants, and, when sleepless, musicians and story tellers were at his service. When convalescent, the patients were separated and encouraged by the sight of dancing and of light comedy, so that in these early times part of the treatment of our own asylums of the present day seems to have been anticipated. In later years, however, the hospital seems to have fallen into a comparatively neglected and impoverished condition, although in 1593 it was described 'as of great revenue.' When visited in 1798 by M. Jomard there were only ten insane patients, chained by the neck in barred cages; the women naked or nearly so. In 1800 Napoleon sent Dr. Desgenettes to visit it, who found twenty-seven sick and fourteen lunatics all apparently in a miserable condition. The lunatics were chained to the wall, and receiving no attention beyond being fed at irregular intervals. In 1856 the lunatics were removed from the old hospital to a warehouse on the Nile. When visited by Drs. Urquhart and Mr. W. Tuke in 1877-8, the 200 patients were in a most wretched state. The excited cases were barred in cages and kept in subjection by the whip. The walls and floor filthy, the water and latrines conjoined; one patient was loaded with heavy chains. A year later, however, when visited by Mr. Tuke, he saw squalor but not dirt. Strait-waistcoats but no chains were used.

In 1880 the lunatics were removed to an old building which had once been a palace. In 1883, when visited by Dr. Sandwith and other Englishmen, the asylum was in a wretched state. He says that 'filth, hunger, chains, nudity, and courbash met us at every point.' In 1884 Dr. Sandwith became one of the two new chiefs of the Sanitary Department. He found about 240 men and 60 women clothed in rags, lolling all day upon their beds. Those supposed to be dangerous had long chains, and fastened round both ankles. The latrine accommodation was disgusting. There were no efficient attendants nor physicians. Dr. Sandwith procured the services of an Egyptian assistant physician with a Paris diploma. He caused the chains to be removed, the cesspools and latrines to be filled up, and substituted better arrangements. He provided accommodation for 300 patients and introduced proper attendants. Airing courts were instituted, and workshops for the employment of the patients. Baths, laundry, kitchens, and store-rooms were added. The walls were painted, and an air-space of 790 feet allowed to each patient. A good diet roll was introduced for the patients, and water filters placed in the corner of each gallery. Eventually a deserving old Mussulman was appointed to be superintendent. He was allowed an assistant that had some experience in lunacy at Paris. The author goes on to describe the other improvements gradually introduced, and the better manner in which the asylum is now kept. He remarks that on his last visit, out of 226 men and 26 women, 23 men were being treated for delirium following the use of hasheesh, and 150 chronic dements whose insanity was traceable to habitual intoxication with the drug. The use of cannabis is also a frequent cause of insanity in Indian asylums. Dr. Sandwith remarks the almost total absence of general paralysis amongst the lower classes in Egypt, who live on vegetable food and use no intoxicating drinks.

W. W. IRELAND, M.D.

ARTICLE 1339.

BISHOP ON THE MEDIO-TARSAL JOINT.*

THE author makes the following observations on the external appearances and anatomy of the foot in cases of varus. Looking at it from the front, the foot appears to deviate inwards from the straight line from the point where the anterior surface of the leg meets the dorsal surface of the foot; or, in other words, slightly behind the plane of the medio-tarsal joint. Looking at it from behind, the centre of the heel is nearer the central plane of the body than the straight line passing down the leg. Looking at the sole from below, one immediately recognises that, although in some cases the sole is bent laterally at the level of the medio-tarsal joint, it is much less than would have been expected after inspection of the dorsal surface, and, in some marked cases of talipes varus, the sole is in a straight line from heel to toes. The sole, which in many cases appears to be in the same plane as that of the posterior surface of the leg, or approximating to it at a slight angle (10° to 30°, or even less), is placed with its antero-posterior axis at an acute angle, sometimes even at a right angle to the vertical axis of the latter. Its plantar surface may be nearly flat, but more frequently there is a marked elevation, of which the apex is opposite the medio-tarsal joint, and therefore on the internal aspect of the foot. If such a foot be stripped of skin, a firm band is seen stretching from the tubercle of the os calcis to the head of the first metatarsal, and binding these firmly together. This band is the edge of the plantar fascia, which extends outwards, becoming less marked and apparently less tense as it approaches the outer edge of the foot. If all muscular tissue is removed from the sole, the bones will be found to be crowded together on its inner aspect, the os calcis remaining in its normal relation to the cuboid, but rotated inwards upon the astragalus on its antero-posterior axis. The astragalus, scaphoid, internal cuneiform, and metatarsal are bound together by their respective internal lateral ligaments. If these, on that aspect, are now divided, and the foot straightened, the os calcis is now turned outwards on its antero-posterior axis, so that the plantar surface, which previously looked inwards and downwards, now looks directly downwards, but its relation to the cuboid bone is not altered, while the rest of the tarsus, being firmly attached to the cuboid, travels also with it in the same direction. On the internal edge, however, the joints are seen to gape widely. The anterior articular surface of the scaphoid is some distance from the cuneiform, whilst its posterior surface slides outwards upon the head of the astragalus, which is thus left partially uncovered. The explanation would appear to be that in these cases, from malposition in utero, the socket has been rotated inwards, upwards, and backwards, in a lateral direction, upon the head of the astragalus, whose neck has been deflected inwards by the same pressure. The plantar fascia and flexor brevis digitorum, with the abductor pollicis, are not developed to their full extent, and so prevent the heel and toes from being properly separated to their normal distance. As these structures are most fully developed, and normally strongest in their inner segment, the internal segment of the foot suffers most, and we know that the bones here present are the last to remain entirely cartilaginous, the scaphoid, indeed, being the very last to show a centre of ossification. Their development is, therefore, most easily checked. Such a socket is in the condition of a semi-closed fan, of which the handle would be at the calcaneo-cuboid junction, one rib passing forwards towards the head of the first metatarsal, one backwards towards the point of the heel, one directly upwards through the scaphoid bone, and two others on either side of this, and through the head of the astragalus and internal cuneiform respectively, and kept so closed by a band passing from one outer rib to the other, whilst smaller bands unite the middle ribs. The whole rotated on a swivel fixed opposite the centre of the curve formed by the head of the astragalus from an horizontal plane inwards to one at an angle of 45° or more with its normal. BERTRAM C. A. WINDLE, M.A., M.D.

SOME time ago the Empress Augusta, in conjunction with the German Society of the Red Cross, offered a prize of £300 for a portable military hospital. It was intended that an award should be made last September in connection with the Brussels International Exhibition, but at that time and place no satisfactory exhibits were offered. In consequence, the Empress has decided to make the prize £500, and in June 1889 an exhibition is to be held at Berlin, in which all countries are invited to take part, and at which all the competing arrangements will be shown. It has also been decided to give prizes for sections of the whole set of appliances, as, for instance, for the best collection of surgical instruments or of medicines.

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* The Medio-tarsal Joint from an Orthopædic Point of View. *Medical Chronicle*, January 1889, p. 285.)

SURGERY.

RECENT PAPERS.

1340. Krafft.—The Surgical Treatment of Perityphlitis from Perforation of the Vermiform Appendix. (*Revue Médicale de la Suisse Romande*, No. 10, 1888.)

1341. Coley.—The Treatment of Penetrating Gunshot Wounds of the Abdomen. (*Boston Med. and Surg. Jour.*, Oct. 10, 1888.)

1342. Abbe.—On Dupuytren's Finger Contraction.

1343. Buller.—On Penetrating Wounds of the Eyeball. (*Montreal Med. Jour.*, October 1888.)

1344. König.—On the Prognosis of Operations for Cancer. (*Archiv für klinische Chirurgie*, Band xxxvii., Heft 3.)

1345. Lloyd and Deaver.—A Case of Focal Epilepsy Successfully Treated by Trephining and Excision of the Motor Centres. (*American Jour. of the Med. Sciences*, November 1888.)

1346. Hunt, Dr. W. A.—On Cocaine. (*Journal of the British Dental Association.*)

Art. 1340. *Krafft on the Surgical Treatment of Perityphlitis from Perforation of the Vermiform Appendix.*—In the *Revue Médicale de la Suisse Romande*, No. 10, 1888, Dr. C. Krafft, of Lausanne, argues that perityphlitis, which is almost always the result of perforation of the appendix vermiformis by a stercoral concretion, belongs to the domain of surgery, as it cannot be treated with certainty nor the dangers of relapse be prevented save by operation. Relapse cannot be prevented by strictly medical treatment, and perityphlitis is always accompanied, it is stated, by the formation of a purulent deposit. Perityphlitis may terminate in one of three ways: in death from primary general peritonitis; in some complication more serious than the original lesion, as, for instance, the rupture of the abscess into the chest, or the bladder, or a large vein; and thirdly in cure, which, the author asserts, is in most cases only apparent. The abscess remains circumscribed, but as its purulent contents are very rarely absorbed, may at any time set up a serious and probably fatal relapse. Dr. Krafft, whilst acknowledging the difficulty at present of laying down any precise indications for surgical interference in passive cases, is of opinion that in the course of a few years it will be held justifiable to cut down on a retro-cæcal abscess and to ligature and excise the vermiform appendix even after all symptoms of peritonitis have disappeared. If in such operation the peritoneum be wounded, the rent should be closed at once by sutures: the risks of peritonitis are not greater than those attending extirpation of the rectum with opening of the peritoneal cavity, which, it is known, are not often very serious.

1341. *Coley on the Treatment of Penetrating Gunshot Wounds of the Abdomen.*—Dr. W. B. Coley has recently made a collection of all the reported cases, seventy-four in number, of gunshot wounds of the abdomen treated by laparotomy, and has tabulated these, and arranged them in classes (*Boston Med. and Surg. Jour.*, Oct. 10, 1888), with the view of bringing out the more important points in reference both to diagnosis and treatment. The first case of laparotomy for gunshot wound was one reported by Baudens, of France, in 1836. The bullet had entered at the umbilicus and made its exit through the quadratus lumborum, wounding the intestine in two places. Baudens opened the abdominal cavity, resected eight inches of the small intestine, and united the edges with the Lembert suture. After the death of the patient on the third day, the autopsy revealed a wound of the cæcum which had not been discovered at the time of operation. In a second case treated by this surgeon, which was one of wound of the transverse colon, the patient recovered after laparotomy and suture of the intestine. The cases collected by Dr. Coley are arranged in three classes, with reference to the time intervening between the injury and the operation. The first class contains thirty-nine cases in which the operation was performed within the first twelve hours; of these eighteen resulted in recovery and twenty-two in death, the percentage of recoveries being 43·6. In Class 2, containing twenty-two cases operated on after twelve hours, five patients recovered and seventeen died, a percentage of recoveries of 22·7. The third class contains thirteen cases, in the reports of which the time of operation could not be ascertained. These tables, it is stated, show very clearly the advantage of an early operation, the percentage of recoveries in cases operated on during the first twelve hours being nearly double that of cases operated on subsequently.

1342. *Abbe on Dupuytren's Finger Contraction.*—Dr. Robert Abbe, of New York, has recently published a reprint of a paper on the nervous origin of Dupuytren's finger contraction read before the surgical section of the New York Academy of Medicine on Feb. 13, 1888. In a previous paper on this subject published in 1884 reports were given of a series of cases, the study of which had led the author to assume the following working hypothesis as capable of explaining fully the symptoms observed in this disease: (1) a slight traumatism of the palm, often entirely forgotten; (2) a spinal impression produced by this peripheral irritation; (3) a reflex influence to the part originally injured, producing insensible hyperæmia, nutritive tissue disturbances, and new growth, shown in the contracting bands of fascia and occasional joint lesions, resembling subacute rheumatism; (4) through the tense contractions a second series of reflex symptoms, neuralgias, general systemic disturbances, and a reflection of the trouble to the corresponding part of the opposite hand. Subsequent experience, Dr. Abbe states, has confirmed this theory of the nervous origin of Dupuytren's contraction. Very few subjects of this affection, it has been found, have a specially strong hereditary or personal predisposition to gout, and many have no taint whatever of either rheumatism or gout. It rarely, if ever, happens that both hands are affected simultaneously. Much stress is laid on the frequent association with finger contraction of neuroses and neuralgic pains in different parts of the body, and particularly of radiating neuralgic pains in the affected hand. These pains, whether seated in the contracted extremity or in distant parts, are, it is asserted, usually relieved at once by division of the fibrous bands. In his operative treatment of Dupuytren's finger contraction, Dr. Abbe prefers excision of the band, if it be well defined. If the skin be much involved and the band matted to the sheaths of the tendons, he makes numerous transverse open sections. The small, gaping wounds fill quickly with granulations, or else close by primary union. The soft scar does not contract, and the wounds are entirely healed after intervals of from ten to fifteen days.

1343. *Buller on Penetrating Wounds of the Eyeball.*—In a paper read before the Canadian Medical Association, at Ottawa (*The Montreal Med. Jour.*, October 1888), Dr. Frank Buller, Professor of Ophthalmology, McGill University, asserts that notwithstanding the well-known rules of procedure in the management of injuries to the eye, none but the expert can justly appreciate the difficulties and dangers that now and then require to be faced, and that the lack of prompt and suitable treatment is the chief element in the disastrous results so often seen to follow comparatively unimportant injuries. Whilst it is undoubtedly true that wounds, even when extensive, of the ciliary region are often not followed by any serious consequences, on the other hand comparatively trivial injuries in this locality are not infrequently followed by loss of vision in one or both eyes. Clean cut wounds, either with or without traumatic cataract, are, as a rule, much more amenable to treatment than lacerations or injuries inflicted with blunt objects which tear and bruise the injured part. Whenever a wound, whether clean cut or lacerated, is allowed to heal with any portion of the uveal structures entangled in the scleral aperture, there is a serious risk of consecutive irido-cystitis and of sympathetic ophthalmia, and for this reason immediate attention is almost indispensable to the successful treatment of such cases. Dr. Buller holds that the edges of the wound should be freed of uvea along its whole extent. This in many cases can only be accomplished by separating the edges of the wound, and by clearing away with fine scissors and forceps all the uvea from its inner surface, so that the bare and clean sclerotic can be brought into accurate coaptation with one or more fine sutures. This procedure, to be effectual, should be done early and within twenty-four hours from the injury. Any subsequent inflammatory reaction can be readily controlled by frequently changed iced compresses soaked in a weak solution of perchloride of mercury. Three cases are reported of extensive wounds of the ciliary region in which Dr. Buller applied this treatment with complete success. But, it is stated, even when every possible precaution has been taken with this class of wounds, most of them will go wrong in one of two ways—either an acute suppurative panophthalmitis will speedily extinguish the flickering ray of hope, or an equally unfortunate termination will occur through the slower but more insidious and dangerous ravages of a chronic irido-cystitis, leaving a shrunken and sensitive eyeball, with a choice between sympathetic ophthalmia or some preventive operation which at best will leave a maimed and sightless eyeball.

1344. *König on the Prognosis of Operations for Cancer.*—At the last congress of the German Society of Surgery, held at Berlin in April, Professor König discussed the prognosis of carcinoma after operation, especially with reference to cancer of the rectum. In this communication, published in the *Archiv für klinische Chirurgie*, Band xxxvii., Heft 3, the author, whilst acknowledging that recent improvements in operative surgery have considerably reduced the risks of procedures for the removal of cancer, save in cases in which the disease affects a canal lined by mucous membrane, as, for instance, the rectum, doubts whether surgeons are thus enabled to effect a permanent cure. It is stated that even in cases in which there has been freedom from relapse during three years after the operation, the cure must be regarded only as a temporary one. Of 66 cases of cancer of the breast operated on by the author some years since, relapse occurred within the first six months in nearly one half, and in the second half year in one-third. The disease returned before the end of the second year in seven cases, in the third year in four cases, in the fourth year in two cases, and in one case after an interval of ten years and a half. Still, although very sanguine expectations as to the permanent cure of cancer of the breast by operation ought not to be entertained, it cannot be denied that a considerable number of patients remain free from the disease for a long time after such treatment, and that the most recent statistics show a marked improvement in this respect. Of 135 subjects of mammary cancer treated by operation up to a recent date, 20 at the time that this paper was published were free from relapse after intervals of more than three years, and of these 10 remained well over six years. These good results are attributed to more radical methods of operation, and especially to careful removal of the axillary glands. The results of excision of rectal cancer are, it is asserted, much less favourable than those of excision of cancer of the breast, and König does not agree with Esmarch, Bardenheuer, and other German surgeons, in their favourable estimate of the former operation. This procedure, König holds, is much more fatal and more liable to be followed by relapse than removal of the cancerous breast, and its functional results, especially when the anus and much of the rectum has been removed, are very bad. A brief analysis is given of 60 cases in which this operation was performed at Göttingen in the course of twelve years. The anus was removed in 16 and preserved in 44 cases. In 15 cases the peritoneal cavity was opened in the course of the operation. In 24·5 per cent. of the cases death occurred as the direct result of the operative treatment, but the mortality, it is stated, has during the last six years been reduced by improved antiseptic measures to 16 per cent. The danger of the operation König agrees with Bardenheuer in attributing not to peritonitis but to diffuse phlegmon in the opened connective-tissue spaces, set up through communication of the wound with the intestine. There has been freedom from relapse after intervals of three years in 10 per cent. of the cases, and after two years in 15 per cent. Although in the majority of instances of relapse the patient was again affected in the course of the first twelve months after the operation, three cases are referred to in which the disease did not return until after the third year, and in one of these cases there had been freedom from cancer for four years and a half. König's objections to extirpation of rectal cancer seem to be based mainly on the unfortunate condition in which the patient is so often left after this operation. Of 21 patients who had recovered from the operation, 4 in whom extirpation of the whole circumference of a portion of the rectum had been practised, suffered from complete incontinence. Of those in whom a partial removal of the circumference of the gut had been performed, 2 suffered from stenosis and 9 others from incontinence. In the treatment of severe cases of cancer of the rectum König would advocate colotomy in the left iliac region. This, it is held, cannot be regarded as a very dangerous operation. Of 20 patients on whom it had been performed death occurred soon afterwards in 6, in 2 of these as a result of perforation of the intestine near the seat of the cancerous disease, in one from collapse, in one from pneumonia, and in one from peritonitis starting from the seat of the operation.

1345. *Lloyd and Deaver on a Case of Focal Epilepsy Successfully Treated by Trephining and Excision of the Motor Centres.*—The following case, the medical report of which was furnished by Dr. J. H. Lloyd and the surgical report by Dr. J. B. Deaver, of Philadelphia, was read before the American Neurological Association at the meeting of the Congress of American Physicians and Surgeons, held at Washington in September last (the *American Journal of the Medical Sciences*, November 1888). The patient was a male, aged 35 years, who at the age of 21, and six years after a blow on the head which had rendered him unconscious for a short time and necessitated his confinement to bed for one week, had his first, or what he thought to be his first, seizure while asleep, in which seizure he bit his tongue. Nine months after this first discovered fit he had his first seizure in the day, and subsequently he had them varying in number and intensity up to the time of his admission into the Philadelphia Hospital, under the care of Dr. Lloyd. The patient was carefully watched, and the following is a description by the resident physician, Dr. F. W. Talley, of a characteristic attack observed on the second night after admission. The fit commenced in the left arm. The fingers were flexed over the thumb, the hand flexed at the wrist, the forearm flexed upon the arm. The head was drawn over the right side, the right arm and leg then becoming rigid. The head soon began to rotate to the left, the fingers of the left hand became relaxed, the mouth opened and was drawn to the left side with the right angle depressed. As soon as the face reached the median line, a series of clonic spasms began in the left arm and the left side of the face. The pupils were widely dilated and fixed. Consciousness appeared to be preserved, partially at least, throughout. Following the fit, which was of very brief duration, there was well-marked paresis of the left arm and left side of the face. The seizures at first were mostly nocturnal; but they soon increased in frequency and occurred both by day and night. The greatest number of seizures recorded in one day was twenty-eight. The paresis of the left arm and left side of face soon became very noticeable. This paresis improved considerably during long intervals when the fits were infrequent, and was most marked just after a seizure. There were no intra-ocular signs of any organic cerebral change. The patient complained but little of headache, and did not suffer from any gastric irritability. The onset of the seizures was proved by numerous observations to have been always the same. The left hand, especially the fingers, was the seat of the signal symptoms, both sensory and motor, and, however varied the extent of the convulsive wave in different seizures, there was never any variation from this constant irritation. Dr. Lloyd diagnosed a focus of discharge in the region of the junction of the middle and lower thirds of the ascending frontal convolution on the right side, possibly involving also contiguous portions of the ascending parietal convolution. This irritative lesion, it was surmised, might be old scar tissue and thickened membrane. On June 12 the patient was submitted to operation by Dr. Deaver, it having been decided beforehand that the incision should be simply an exploratory one in case nothing was discovered in the membranes or cortex, unless by faradic stimulation the irritative area in the cortex could be localised in the cortex, in which case it was to be cut out. The positions of fissures of Sylvius and Rolando having been marked on the shaven scalp on the right side by Reid's lines, a large horse-shoe-shaped flap with its convexity downward and forward, and formed of all the layers of the scalp, including the periosteum, was dissected up. With an inch-and-a-half trephine, Dr. Deaver then exposed an area which appeared to include both sides of the fissure of Rolando in the region of the junction of the lower and middle thirds of the ascending convolutions, which area was afterwards much enlarged by cutting away several small pieces of bone from the anterior margin of the opening made by the trephine. No morbid changes of any kind were observed in the bone, membranes, or cortex at the seat of operation. Faradic stimulation having produced, at one point posterior to the fissure of Rolando, movements of the fingers and wrist, and at a second point in front of this fissure and below the first point, contractions of the muscles of the forearm and face, and reproduction of the exact muscular movements, observed in the fits having been thus brought about, Dr. Deaver excised from the region behind the fissure of Rolando a portion of brain substance, about 12 millimètres square, carrying the incision down to the white matter, and afterwards two smaller portions from the excitable region in front of the fissure. The patient had been carefully prepared for the operation, and the entire scalp had been closely shaved, thoroughly cleansed, and enveloped in a towel wrung out of a solution of perchloride of mercury (1 : 1,000). During the operation the most strict antiseptic precautions were observed. The wound closed speedily without any local complications, and was quite healed on the thirty-seventh day, notwithstanding much restlessness on the part of the patient and frequent disturbance of the dressings. A slight rise of temperature on the seventh day was followed by œdema of the scalp, and a collection of blood-stained serum between the scalp and the trephine opening. The operation was followed by marked paresis of the arm and face on the left side. Twitchings of the face, accompanied occasionally by twitching of the left hand and forearm, occurred at intervals during the first six days. These afterwards ceased, and the patient remained free from convulsions up to the time of the writing of these reports. From about the sixth until the eighteenth day the patient was dull, lachrymose, and incoherent, and for a part of the time had marked maniacal delirium with hallucinations of sight and hearing. From this ominous condition he began gradually to improve toward the end of the third week; at the end of the fifth week he was practically well, and had recovered some of his lost muscular power. Three months after the operation the left side of the face was markedly paretic. The regain of power in the muscles of the left upper extremity was rather greater than had been expected. The muscles especially paralysed in the forearm were the flexors of the fingers. The patient had good control of the flexors of the wrist, and the biceps contracted firmly.

W. Johnson Smith.

1346. *Hunt on Cocaine.*—After alluding to the effect of the drug upon the different systems, the author calls attention to the sharply defined boundary within which it exercises its anæsthetic effects; and points out that, even within the anæsthetic area, the tactile sense is very little interfered with. He regards the mouth as the most difficult situation in the body for the use of cocaine, but it is nevertheless of great service when judiciously employed. He has occasionally noticed uncomfortable symptoms, but these are of relatively infrequent occurrence. They were pallor, gaspy respiration, nausea (never sickness), weakness of pulse, tingling, cold sweats, and deafness, but soon passed away in a short time after giving a little sal volatile. Curious and ephemeral mental symptoms are sometimes induced, but are usually more amusing than alarming. He has used cocaine most successfully for epithelioma of lip, for dissecting out large growths from the parotid region, in the removal of tarsal cysts, and many other purposes in minor surgery, in addition to three or four hundred cases of tooth extraction. He refuses to consider it a dangerous drug, and said he had never met with an authenticated case of death from its use in reasonable doses.

ALFRED S. GUBB.

MEDICINE.

RECENT PAPERS.

1347. FORLANINI.—The Treatment of Pleurisy by the Inhalation of Compressed Air. (*Gazz. degli Ospitali*, October 1888.)

1348. EARLE.—On the Influence of Sewerage and Water Pollution on Diphtheria. (*Archives of Pediatrics*, No. 59.)

1349. DUBOUÉ.—The Treatment of Cholera.

1350. HÉRARD.—Hydrofluoric Acid in the Treatment of Pulmonary Tuberculosis.

1351. STEINER.—On Symmetrical Gangrene. (*Deutsche med. Wochensch.*, No. 4, 1888.)

1352. MARTELL, S.—On the Treatment of Lung Tuberculosis. (*Wiener med. Wochensch.*, No. 2, 1889.)

1353. NAUNYN, B.—A Case of Relapsing Fever with the Constant Presence of Spirilli in the Blood. (*Mitteilungen aus der med. Klinik zu Königsberg, i. P.*, and *Deut. med. Zeitung*, No. 88, 1888.)

1354. ALMELA, E.—Observations on Diphtheria. (*El Siglo Medico*, Oct. 28, 1888.)

ART. 1347. *Forlanini on the Treatment of Pleurisy by the Inhalation of Compressed Air.*—Professor Forlanini, of Turin, strongly recommends the above method of treatment chiefly with a view to promoting the expansion of the compressed lung after the fluid has been evacuated. And even in tubercular cases, which, the author considers, form more than half the cases of pleuritic effusion, much good is obtained, for the compressed air treatment increases the appetite and the sense of well-being, promotes tissue change, and generally improves the condition of the patient. The difficulty has hitherto been the complexity and costliness of the necessary apparatus, but Professor Forlanini has devised a more simple form. The difficulties in the nature of giddiness, palpitation, ringing in the ears, &c., &c., are simply questions of dose and skill in administration, and are not drawbacks inherent in the system.

H. HANDFORD, M.D.

1348. *Earle on the Influence of Sewerage and Water Pollution on Diphtheria.*—Dr. Earle says he has been convinced for many years that undue importance has been given to sewer-gas as a causative agency. And, in order to get some negative evidence upon the point, he addressed a number of inquiries to physicians practising in remote parts of the great North-West of America, where both air and water would be above suspicion. The states and territories comprised Minnesota, Dakota, Montana, Wyoming, Kansas, Utah, Idaho, and California. Twenty-five answers were received, and the following are the conclusions:—Firstly, diphtheria occurs in the mountains and prairies of the great new North-West with the same malignancy as in cities. Secondly, diphtheria takes place with equal virulency in parts remote from sewers. Thirdly, diphtheria once present, the inhabitants living in damp sod houses, or over cellars containing decomposing vegetables, or in proximity to manure heaps, or poorly constructed sewers, seem to be in surroundings which increase the severity of the malady. Fourthly, the fact is again demonstrated, although developed incidentally, that the contagious element may be carried thousands of miles in a manner difficult to understand. Fifthly, testimony is abundant that the poison may be transported by means of cars and steamers.

RALPH W. LEFTWICH, M.D.

1349. *Duboué on the Treatment of Cholera.*—M. Duboué (of Pau), after a careful study of cholera, concludes that all agents which prevent the division of the epithelial cells (nitrate of silver, sulphate of copper, tannin), may be of benefit in the prophylactic treatment of cholera. When the circulation of the blood is interrupted, towards the end of the algid period, the most urgent necessity is the restoration of the circulation. This may be obtained by three means. The first consists of intravenous injections, but is extremely critical, and in certain cases cannot be employed. The second method, which is easily applied, is tracheocentesis. The third can only be employed in the absence of the apparatus required for tracheocentesis. It consists of immersing the patient in water of the same temperature as the body during two to three minutes. This method should be employed by the physician only, and in none but desperate cases.

1350. *Hérard on Hydrofluoric Acid in the Treatment of Pulmonary Tuberculosis.*—At a recent meeting of the Academy of Medicine M. Hérard stated as his opinion that highly concentrated hydrofluoric acid is not a dangerous agent; inasmuch as an atmosphere charged with the vapour of hydrofluoric acid may be inhaled during a whole hour in doses of 1 litre per minute. Moreover this acid contains from 50 to 60 per cent. of water. MM. Grancher and Chautard maintain that the vapour of hydrofluoric acid has no action whatever on the evolution of experimental tuberculosis. M. Grancher submitted six rabbits to inhalations of this vapour, after injecting a tuberculosis cultivation, pure, into their ear. All these animals died; bacilli were found in the liver, spleen, and lung. M. Hérard asserts that the vapour of hydrofluoric acid cannot affect these viscera, nor the deep-seated regions of the pulmonary parenchyma. It is incontestable that it modifies the vitality of the bacilli, and the ulcerated lesions in the lung. At the Congress of Oran, MM. Moreau and Cochez stated that, in sixty cases of pulmonary tuberculosis, they had observed a notable improvement in twenty-eight cases, where hydrofluoric acid was administered. M. Gœtz reports nineteen similar instances out of thirty cases he treated. M. Hérard is convinced that the vapour of this substance may be inhaled with impunity, and that it modifies and even destroys the virulence of the tuberculous bacillus. M. Jaccoud remarked that the experiments made by MM. Grancher and Chautard coincided with his own, and proved nothing in favour of hydrofluoric acid in the treatment of tuberculosis. W. VIGNAL.

1351. *Steiner on Symmetrical Gangrene.*—A young girl of 17 suddenly developed a patch of gangrene on the back of the right hand and then on both forearms. These gangrenous patches were preceded and accompanied by painful sensations and creeping feelings. There was no evidence of chlorosis or anæmia, and the circulatory system was quite normal. She had previously frequently suffered with cold extremities, dead fingers, &c., and menstruation was scanty. No further patches developed. The author considered the case to be one of Raynaud's disease. G. N. PITT, M.D.

1352. *Martell on the Treatment of Lung Tuberculosis.*—Dr. S. Martell recommends insufflations of calomel; these he has tried for the last three years with the most favourable results. By his method of inhalation the medicament reaches, so he claims, the actual site of disease, and in the tissues, by the presence of chloride of sodium, is converted into sublimate in the nascent state. He uses Rabierski's spray with a larger balloon than usual (9 centimètres in diameter), so as to obtain more power, and a vulcanite tube with a terminal bulb or olive is also attached to it. This tube is to be placed in the mouth, far back on the tongue, and the patient is to breathe through his nose with his mouth shut. A pierced vulcanite conical cork is placed in the nostril of the affected side, because in forced breathing the pressure of the atmosphere causes the ala nasi to close like a valve. To avoid as much as possible carrying the remedy to the sound lung, the nostril of that side must be closed by the finger, and the sound lung must be kept in a state of inaction as far as possible; to obtain this the patient must bend his body to that side. The treatment is best carried out when the patient is lying on his back in bed. By pressure on the balloon the act of inspiration naturally is intensified, and the powder contained in the spray will be carried into the lung with a power represented by the following equation $x = a + b$ (when a is the inspiration capacity of one lung and b the pressure power of the balloon). To facilitate the entrance of the powder into the trachea, the patient's head must be bent back as far as possible to straighten the course, and forced inspirations must be taken to separate the vocal cords. Martell recommends regular breathing exercises to teach the patient the proper manner of inhaling. These exercises are divided into three movements:—1. A deep inspiration is to be taken, and at the same time the arm of the affected side is to be raised parallel to the body in the middle line. 2. The pause in which the patient is to remain in the same position to give time to the particles of calomel still in motion to subside and adhere to the bronchial mucous membrane. The act of inspiration is to be prolonged from day to day, so as to increase the intrapulmonary pressure, and thereby to aid in the establishment of compensatory dilatation of the lung alveoli. 3. Expiration: this is to be accomplished gradually, and not in jerks, so as not to provoke cough. The raised arm is to be slowly dropped. Treatment is begun after the patient has practised these exercises for a week. Patients who are easily made to retch must gargle with cold water before the tube is placed in the mouth, and the irritability of the mucous membrane may be gradually overcome by the patient touching his palate with the bulb of the tube several times a day so as to get used to it. Pressure on the balloon is to coincide with Movement 1 of deep inspiration; and the stronger the inspiration, the stronger the pressure-power of the apparatus, the deeper naturally will the powder be driven into the bronchial subdivisions. The abundant interstitial lymph-adenoid tissue of the lung is surrounded by a network of lacteals (Laudois). Round the larger bronchi and vessels is a great irregular network of lymphatic vessels. The lacteal system and the lymphatic system are injected, when animals breathe a spray of coloured fluid. That properly divided substances can reach the smallest bronchi, in whose walls the tuberculous process mostly begins, is proved by the experiment of Tappeiner. There is no doubt, then, that the finely divided powder penetrates even to the lymphatics which lie near the affected parts, and there exerts disinfective action on the tuberculous process. In the lymphatics the calomel is changed by the chloride of sodium present into sublimate, which cannot fail to exert its antiseptic properties. After the insufflation the patient should gargle carefully with an astringent and antiseptic mouth-wash to remove the particles of the calomel from the palate and throat. The daily insufflations can be increased gradually from two to twenty-five after eight days. Dr. Martell promises to give the detailed results of his treatment shortly in another paper, and at present contents himself with saying that the chief symptoms of lung tuberculosis are influenced in the most favourable way from the commencement of this treatment.

1353. *Naunyn on a Case of Relapsing Fever with the Constant Presence of Spirilli in the Blood.*—Until now it has always been observed that Obermeyer's spirochæta appeared with the fever, and with the crisis again disappeared from the blood. Only in quite exceptional cases has it been possible to demonstrate their presence in the blood for some time (forty-eight hours) after the ensuing crisis. In a case of relapsing fever, in a man fifty years old, who died in the sixth week of the illness, Naunyn was able to establish the presence of the spirilli in the blood for fourteen days consecutively; they were less numerous after a critical fall of temperature, but did not disappear.

1354. *Almela on Observations on Diphtheria.*—Dr. Almela (*El Siglo Medico*, Oct. 28) thinks that the contagium of diphtheria is to be found in deposits of mud carried from place to place by rain; in many cases observed by him, when the disease had not been contracted from another patient, the children had been in contact with this mud. Excrementitious matters principally from horses, donkeys, and mules fall on the land and are absorbed to a certain depth; the rain comes and washes away the superficial layer of the soil, and forms in streets and other places deposits of mud. In this mud the germs find a suitable soil for their growth, which is also favoured by the excessive humidity. Heat is of secondary importance, a moderate temperature, indeed, seeming more favourable. The longer the interval between the storms of rain the more fatal is the epidemic; if rain occurs at short intervals the mortality is diminished, though the invasions are not. In treatment this formula has given the best results: ℞ Soda bicarbonate, 10 grammes; quinine, 2 grammes; potash permanganate, 0·50 gramme. Insufflations of 50 centigrammes every two hours. Iodine ointment externally. G. D'ARCY ADAMS, M.D.

THERAPEUTICS.

RECENT PAPERS.

1355. CRAMER, G.—Rapid Recovery from the Morphia-Habit. (*Memorabilien*, xxii. Jahrg. 3 Heft.)

1356. SPÄTH, F.—On the Internal Administration of Creolin. (*Münch. med. Wochensch.*, and *Wiener med. Wochensch.*, No. 2, 1889.)

1357. BETANCOURT, A.—Clinical Observations on Manzanillo. (*Rev. de Ciencias Medicas, Habana*, Nov. [illegible] 1888.)

1358. TER-ZAKARIANT, DR.—On the Eschscholtzia Californica. (*Bull. Gén. de Thérap.*, Jan. 15, 1889.)

1359. HUCHARD, DR.—On the Contra-indications of Antipyrin during Menstruation. (*Rev. Gén. de Clin. et de Thérap.*, Jan. 24, 1889.)

1360. D'ESPINE, DR.—On the Local Treatment of Diphtheria with Salicylic Acid. (*Rev. Méd. de la Suisse Romande*, Jan. 20, 1889.)

1361. SÉE, PROFESSOR G.—On Strophanthus and Strophanthin. (*Bulletin Médical*, Jan 23, 1889.)

1362. BUCQUOY, DR.—On Strophanthus and Strophanthin. (*Bulletin Médical*, Jan. 30, 1889.)

1363. Collodion for Chilblains.

1364. DEGOIX.—Coryzal Snuff.

1365. Ointment for Acne.

1366. Formulæ.

1367. BELLELI.—The Treatment of Chronic Dysentery by Enemata. (*Gazz. degli Ospitali*, October 1888.)

1368. GIBSON AND FELKIN.—A Hitherto Unobserved Effect of the Salicylates. (*Practitioner*, January 1889, p. 17.)

ART. 1355. *Cramer on Rapid Recovery from the Morphia-Habit.*—A farmer's wife was given morphia for severe pains following the acute stage of puerperal peritonitis. She soon became so accustomed to it that she took daily 1·06 gramme in solution. Dr. Cramer, insisting on its discontinuance, sent her as a placebo to satisfy her craving, some tincture of castor with the assurance that this medicine would fully replace the first, and awaited in some trepidation her reproaches on his next visit. To his astonishment, however, she thanked him for the new medicine and told him how well it agreed with her. The severe pains had entirely disappeared, and a few drops of the tincture sufficed to relieve the slight attacks she now experienced. The patient, whose state had been most unsatisfactory, soon became convalescent, and the exudation and tumour gradually completely disappeared.

1356. *Späth on the Internal Administration of Creolin.*—Creolin, from its unpleasant taste and smell, is most conveniently given in a pill or capsule. Späth gives the following formula:—℞ Creolin, 12·0; pulv. tragacanth.; spirit. dilut., āā 2·0; succ. liquirit. pulv.; rad. liquirit. pulv., āā 24·0; mucil. gum. arab., q.s. ut fiat massa; e qua ferment. pilul., No. 200. In experiments on himself and two students, in which single doses of from 0·1 to 2·7 grammes, and as much as 8 grammes in the day, were given, no unpleasant results were experienced, save occasional unpleasant eructations. Vomiting was never caused, and the appetite was not interfered with. The urine, when fresh, showed no abnormality; on distillation it gave a colourless distillate, containing no phenol. On the other hand, when the urine was previously acidified with hydrochloric acid, phenol was freely separated. After standing exposed to the air from twelve to twenty-four hours it showed, especially after alkalinisation, the well known dark colouring of the upper strata, as is often observed in carbolic-urine and almost always in napthalin-urine. It was also found that creolin-urine, even after standing for a long time in a warm room, does not undergo ammoniacal fermentation. After even small doses of creolin (0·9 gramme) a marked diminution of the intestinal gas was noticeable, with larger doses (1·5 to 6·0 gr.) it completely disappeared. The fæces showed the most striking alteration. They entirely lost their characteristic smell, and after large doses the odour of creolin was plainly recognisable. This deodorisation of the fæces was more marked when the remedy was given with the meals. These proofs of a limitation of the fermentation and putrefaction phenomena normally occurring in the bowel, are still further strengthened by the fact that in creolin-urine indican is absent.

BOSTON SOCIETY FOR MEDICAL OBSERVATION

1357. *Betancourt on Clinical Observations on Manzanillo.*—A paper read before the Clinical Society of Havana, Nov. 9, 1888. Manzanillo is a tree growing near the mouths of rivers and coasts of the West Indies and the Continent of America. It belongs to the natural order Euphorbiaceæ. All parts of the plant contain a milky juice, most abundant in the bark and fruit. It is said the Indians used this juice to poison their arrows. Applied to the skin it causes inflammation and blisters. Internally, in doses of 18 or 20 drops, it gives rise to a sensation of burning in the mouth and stomach, diarrhœa and choleraic vomiting, cramps, giddiness, profuse sweats, coldness of the extremities, emphysema of the head and face, syncope, and death. Alcohol is the best antidote. Medicinally it is given with honey, one part to three, 2 or 3 drops in milk. This dose has absolutely no taste, and produces generally 10 or 12 actions of the bowels, without pain; 5 or 8 drops will cause from 25 to 30 actions, with colic and vomiting. In certain parts of Cuba it enjoys great repute as a remedy for tetanus. Dr. Betancourt reports three cases in full in which he gave it in combination with chloral and other sedatives, apparently with advantage; in five other cases, which ended fatally, it answered well as a drastic, and notably modified the tetanic symptoms. In dropsy, dyscrasic, cardiac, renal, and hepatic, it is very useful. The author's experience here extends over fifty-seven cases. In conclusion, he says:—Manzanillo is a drastic purgative, having, moreover, a marked diuretic action, notwithstanding that it depresses the circulatory system. It is constant in its effects, tasteless, and in small doses causes no pain or nausea. Of its influence in tetanus, he is doubtful whether the reputation it enjoys is owing to its energy as a drastic purgative or to its depressant effects on the nervous system. It is certainly useful, and never fails as a purgative, and the smallness of the dose is also a recommendation. In cases of cardiac dropsy, in which it is often necessary to give hydragogue cathartics daily over a lengthened period, manzanillo is frequently better borne than any other drug. Dr. Betancourt has given it extensively for the last four years, and is very favourably impressed with its properties. G. D'ARCY ADAMS, M.D.

1358. *Ter-Zakariant on the Eschscholtzia Californica.*—The *eschscholtzia californica* is a plant which is very common in California, where it is often used for its sedative effects. The analysis of an alcoholic extract of the plant resulted in the isolation of a basic substance giving all the reactions of morphine. Experiments on animals with the alcoholic extract caused general prostration, torpor, accelerated respiration, and slowed heart-beat. The effects on patients were identical with those produced by morphine, and no inconvenience was complained of after its administration for sixteen consecutive days. No gastric disturbance, no constipation, no loss of appetite. It never gave rise to headache. The sedative effects were not well marked, but persisted long after the suspension of the treatment. The author concludes that this plant is a soporific medicine of great value, on account of its perfect innocuity, and that its analgesic properties were very useful in a certain class of cases. The dose is from 40 to 160 grains daily, in mixture, syrup, or pill.

1359. *Huchard on the Contra-indications of Antipyrin during Menstruation.*—Antipyrin is possessed of hæmostatic properties which may render its administration undesirable during menstruation unless this be excessive. Dr. Huchard mentions the case of a woman suffering from severe dysmenorrhœa, for whom he ordered 16 grains of the drug, with the effect of immediately suspending the flow. The arrest was accompanied by shivering and cyanosis, and a tendency to syncope. These symptoms caused him a great deal of anxiety for half an hour, when they gradually passed off. He has noticed the same thing, but less marked, in two other cases, in which he had prescribed the drug under similar circumstances.

1360. *D'Espine on the Local Treatment of Diphtheria with Salicylic Acid.*—The author has employed the salicylic treatment for some years past with favourable results. He points out that solutions of 1 : 2000 of salicylic acid are absolutely fatal to the diphtheritic bacillus, and the non-toxicity of the drug in such strength allows of its being used *largâ manu.* He recommends frequent irrigation of the mouth, and, if necessary, of the nostrils, with a 1 or 2 per thousand solution, by means of a syringe. Such injections should be copious and repeated every two or three hours, and the earlier the treatment is commenced the better.

1361. *Sée on Strophanthus and Strophanthin.*—A paper read before the French Academy of Medicine, by Professor Sée, comprises the following conclusion :—That the alkaloids and glucosides of plants are undoubtedly superior to preparations of the plant itself, as, for example, quinine over cinchona, morphine over opium, atropin over belladonna, &c. He asserts that it is thus always possible to dispense with the use of the crude drug which consists of an amorphous mixture, variable in its properties and strength, and therefore dangerous, whereas the active principle is a definite chemical body. This is particularly the case in respect of the active principle of strophanthus. Preparations of the plant vary to a dangerous degree in activity, whereas strophanthin is a definite chemical compound of fixed and known strength.

1362. *Bucquoy on Strophanthus and Strophanthin.*—M. Bucquoy contests Professor G. Sée's views as to the superiority of strophanthin over strophanthus. He has failed to obtain, with the former, the usual diuresis and relief to the dyspnœa. With strophanthus he succeeded in affording relief in seventeen out of twenty cases of mitral asystole. In three cases of angina pectoris great benefit was experienced. In general he prefers the drug itself to the alkaloid, on the same grounds that he preferred to use digitalis rather than digitalin.

1363. *Collodion for Chilblains.*—℞ Iodini pur. 1 part, collodium 40 parts. Dissolve the iodine in the collodium and apply to congested areas once daily.

1364. *Degoix on Coryzal Snuff.*—Dr. Degoix recommends the following snuff, to be sniffed up the nostrils twice or thrice daily :—℞ Acid. boric. 2 parts, pulv. camphoræ 2 parts, pulv. fol. bellad. 1 part. Misce.

1365. *Ointment for Acne.*—℞ Resorcin. 2½ to 5 parts, zinci oxid., pulv. amyli, āā 5 parts, vaseline 10 parts. Fiat unguentum. To be left in contact with the affected skin as constantly as the occupation of the patient allows. It can be removed by means of a plug of wool steeped in oil, and the site should then be dusted with rice powder. ALFRED S. GUBB.

1366. *Formulæ.*—French recommends in chronic Bright's disease four or six pills daily of—Tannin, ½ gr. ; aloes, ⅛ gr. ; ext. tritici rep., 1½ gr.

G. N. PITT, M.D.

1367. *Belleli on the Treatment of Chronic Dysentery by Enemata.*—The author sums up a series of articles on this subject with the following observations. 1. The symptoms of chronic dysentery do not depend so much on the site and extent of the local lesions as on the effect they produce on the rest of the digestive tract. This is influenced largely by the general state of health of the individual, so that two persons with nearly identical lesions in the colon may have symptoms of very varying degrees of severity. 2. In the dysentery of warm climates the lesions in the colon are often so extensive as necessarily to require a considerable length of time for their repair. 3. Enemata, when long continued, have grave disadvantages. The daily distension of the colon stimulates the rest of the digestive tract, and causes imperfectly digested food to be hurried into the large intestine, which it irritates, and so aggravates the disease. And the daily distension of the colon, when long continued, tends to lessen the normal contractility of the coats of the bowel necessary for the performance of its proper functions. Enemata, therefore, are valuable in slight and easily reparable lesions of the colon; but in the more severe cases other measures must be adopted, such as Carlsbad water, taken on rising in the morning. H. HANDFORD, M.D.

1368. *Gibson and Felkin on a Hitherto Unobserved Effect of the Salicylates.*—In the *Practitioner,* Jan. 1889, p. 17, Drs. Gibson and Felkin report a case of myosis due to the administration of salicylate of soda. The patient was a middle-aged lady who was taken ill on the evening of Nov. 9. When seen early next morning she complained of severe pains in the head and limbs, and the temperature was found to be 105°·8 F., while the pulse was 104. The attack was considered to be rheumatic in character, and the patient was given twenty grains of sodium salicylate every two hours. In the afternoon of the same day the pupils were found to be greatly contracted, and their reaction to light was absolutely lost, while the vision was distinctly impaired. On the following day phlegmonous erysipelas made its appearance on the left leg, and the sodium salicylate was not continued, as the temperature had fallen to 101° F. Next day the pupils had returned to their usual size and reacted to light. Three days later the temperature commenced to rise, so the sodium salicylate was again given every two hours, and in the evening the pupils were again found contracted and inactive to light, but on leaving off the drug they soon became normal. The object of reporting this case is to call attention to this peculiar action of the salicylates on the nervous system.

RICHARD NEALE, M.D.

PHARMACOLOGY.

ARTICLE 1369.

CASCARA SAGRADA.—Mr. Emilius Thompson gave cascara in over 300 cases troubled with constipation, and found that in most cases the bowels became regular under its action, no unpleasant symptoms occurring. Dr. M. H. Fussell, of Philadelphia, prescribed it in 50 cases of constipation. In not a single instance did he find it necessary to increase the dose, and in 29 cases he reduced it without diminishing the therapeutic effect. The results were satisfactory in 43 cases. It is probable that in many cases where the drug is unsuccessful, too large doses are administered. Small doses two or three times a day appear better than a large one given at bedtime. It should be known that a tasteless cascara is only obtained at the expense of the bitter-tonic principle it contains (*Therapeutic Gazette*). The griping which is occasionally encountered is accounted for as follows: 'A peculiar change takes place slowly in fresh frangula bark, by virtue of which its physiological action and, probably, its chemical constituents are altered. In its fresh condition it is much more actively irritant than it is when fully ripened by age. The *British Pharmacopœia* recognises this fact with regard to frangula or buckthorn, but completely ignores it in the case of cascara sagrada' (*Id.*). The tabloids are an unobjectionable preparation in general use, containing 5 grains each. One, or a part of one, should be taken at a time.

SALOL.—This salicylate of phenol, being tasteless, odourless, and insoluble in the stomach, appears indicated, instead of the soluble preparations of salicyl, in those cases where the stomach is irritable or a little weak. Being powerfully antiseptic, and only broken up, seemingly, by the action of the pancreatic juice, it has been extensively used in intestinal troubles, and lately it has been made the subject of a prize essay on 'The Prevention and Treatment of Cholera in France.' M. Demme has lately published his results with it in diseases of children, including four cases of articular rheumatism, two of acute endocarditis, two of vesical catarrh, and as an extensive application in burns. Generally speaking, good results ensued. As it is split up into carbolic acid and salicylic acid in the blood, its beneficial action in purulent conditions of the genito-urinary tract is easily understood. M. Demme found it proved beneficial in cystitis caused by cantharides. The equivalent of three to five tabloids allayed the pain, increased diuresis, and removed the alkaline reaction and muco-pus in the urine. After a while the urine presented the greenish-brown hue similar to that produced by carbolic acid.

ICHTHYOL.—Despite its disagreeable odour, ichthyol has been gradually establishing itself as a remedy of no mean properties. Unna says:—'In my opinion we have not up to the present time possessed so effectual a remedy [as ichthyol] for rheumatism.' According to Nussbaum—and his opinion is the same as that of Unna, Blittersdorf, and Lorenz—ichthyol is of special service in all diseases associated with hyperæmia and distended capillaries. Though very disagreeable at first to take, the palate and stomach soon become used to it, and it is stated to improve the appetite in those cases where it is indicated internally, as in intestinal, renal, cystic, or urethral catarrh. It is quite compatible with lanoline and other unguent bases, is miscible with mercury, zinc ointment, &c., and dissolves completely in water. A mild ointment (5 per cent.) is pronounced regenerative, a strong one (50 per cent.) resolvent.

SACCHARIN.—Dr. Jas. Little, of Dublin, reports a case of bladder trouble in a woman, aged 80, where drugs could not be given by the stomach, or the bladder washed out. 'The consequence was,' he says, 'that the urine became so offensive that the odour met one on the stairs. . . . In this difficulty it occurred to me to try saccharin. I directed six of the tabloids to be used daily. In three or four days the urine was no longer offensive.' He says that he found saccharin distinctly useful in other patients (males) passing ammoniacal urine—one a case of catarrh of the bladder in a paralytic, one a case of chronic cystitis with enlarged prostate, and two cases in which there had existed urethral stricture. Mr. Hurry Fenwick relates that he cured two cases of muco-cystitis which were not amenable to ordinary drugs. Dr. McNaughton Jones finds it of material aid 'in those dreaded bladder affections of old age.'

SULPHONAL.—Dr. William H. Flint reports thirty-three cases of insomnia where sulphonal was employed. The patient was not told anything about the drug or its expected action. 'The general conclusion which may be drawn from these reports' (writes the editor of the *Therapeutic Gazette*) 'is that they confirm the early observations as to the great hypnotic value of sulphonal, and show that, even in single doses of twenty or thirty grains, it is a safe and, in the main, reliable hypnotic, free from unpleasant concomitant effects, and usually from all undesirable sequelæ. The single objectionable after-effect witnessed by the writer has been moderate somnolence on the morning following the administration of the remedy.' There was no derangement of appetite, affection of the circulation or respiration, increase or diminution in the sweat or urine, nausea, vomiting, or constipation. Many of the cases were those of debility, neurasthenia, and mental perturbation, in all of which the drug seems to have answered well. Where there was extreme pain the sulphonal did not do so well, though where the pain was slight, as in pharyngitis, it produced sleep. Its action was missing in insomnia from the dyspnœa of cardiac and Bright's disease. In the insomnia of pulmonary tuberculosis and typhoid it acted well. On an average sleep came on in about an hour, and lasted over six hours. The cases were unselected, and 82 per cent. of the trials were successful. As has been frequently pointed out, the insolubility and dose of sulphonal render the tabloids the most eligible form to prescribe.

Phenacetin.—Lepine observes that phenacetin affects the blood less than antipyrin or antifebrin, and that doses of 45 or 60 grains do not markedly affect the heart or cause cyanosis. In reducing the temperature, it is said not to occasion after-sickness, cyanosis, or profuse sweats, though occasionally it appears to have caused these symptoms to a slight extent. Hoppe gave it in twenty febrile cases, found it active and safe, and recommends it for children. At the meeting of the British Medical Association in Glasgow, Dujardin-Beaumetz reported very favourably of the therapeutic utility of phenacetin in febrile and neuralgic ailments. Mesrachi and Rifat administered the drug for months without bad effects. The ordinary dose is two or three 5-grain tabloids, swallowed with a draught of water. It is said to be analgesic, and is used for headache, polyuria, and pain.

Antipyrin.—Of all the purposes to which antipyrin has been applied, in none has it shown itself so useful, perhaps, as in headaches. In his recent Croonian lecture Dr. MacAlister remarked a 'condition in which it had an excellent effect—some called it a specific action—was migraine. In his own person he found that nothing acted so promptly or so certainly in averting or assuaging the paroxysm' (*Brit. Med. Jour.*). Dr. Wilks writes that, after using 'the drug for nearly two years, and having seen its remarkable power in arresting attacks of headache, I can fully corroborate the high opinion held by the profession generally as to its merits.' Recently it has been pointed out that in cases of headache, where it does not relieve by the stomach, a hypodermic injection will prove efficient if a tender point can be detected. The tabloids are adapted for hypodermic use, and two or three can be administered by the stomach.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1370. Gonzalez de Segovia.—Treatment of Post Partum Hæmorrhage. (*La Medicina Practica*, Jan. 9, 1889. Madrid.)

1371. Meredith.—Vomiting in Pregnancy and Menorrhagia. (*Boston Med. and Surg. Jour.*, October 1888.)

1372. Some Gynæcological Cases treated by the Faradic Current. (*Boston Med. and Surg. Jour.*, October 1888.)

1373. Hirst, Dr.—On Six Cases of Puerperal Insanity. (*Obstet. Gazette*, December 1888.)

1374. Picqué, Dr.—On a Case of Ventrofixation or Hysteropexia. (*Bull. Gén. de Thérap.*, Jan. 15, 1889.)

Art. 1370. *Gonzalez de Segovia on Treatment of Post Partum Hæmorrhage.*—Professor Gonzalez de Segovia, of the *Maternidad* of Madrid, discusses the treatment of post partum hæmorrhage in *La Medicina Practica* of January 9. Ergot, quinine, and other oxytocics can only be considered as adjuvants to more energetic treatment. Besides, it is well known that these agents do not act generally on the whole uterus, but seem to have an elective action on the neck and inferior segment, and the risk is incurred by causing contraction of these parts while the body of the organ is relaxed, of converting an external into an internal hæmorrhage. Of the first importance is kneading and compression of the uterus, at the same time a hypodermic injection of ergotin or ergotinin may be given, and the child put to the breast. If the womb does not at once show signs of contracting, external compression is to be kept up by the left hand, while the right clears out clots from the cavity of the womb, excites by its presence the internal walls, and exerts pressure with the fingers on the neck and inferior segment in the direction of the fundus and abdominal wall, that is, in the contrary direction to the pressure exercised by the left hand. If these means do not suffice to control the hæmorrhage, pieces of ice are to be introduced into the cavity of the uterus, followed or not by hot injections (45° C) of sublimate solution, at the same time taking great care to keep up the external compression of the uterus and simultaneously of the abdominal aorta. So-called hæmostatic injections are to be avoided, in spite of the weight of authority in their favour, for, either they are simple astringents, in which case their effects are analogous to that of hot water; or they are caustic, as perchloride of iron, in which case they cause clots which may give rise to embolisms and phlebitis and eschars which, on detaching, may cause secondary hæmorrhage or formation and absorption of septic products. Faradisation is, without doubt, one of the most powerful means of exciting the contractility of the uterus. If the machine is at hand, the positive pole is to be applied directly to the neck of the uterus and the negative to the fundus over the abdominal wall; after three or four minutes the latter is applied to the dorsal region and the former to the hypogastrium. But if all these means fail, 'we have recourse without vacillation to intra-uterine plugging, as recently advised by Auvard.' The patient is placed in the obstetric position (back), an assistant compresses the fundus. The operator introduces his left hand, carefully disinfected, into the cavity of the organ, extracts the clots and remains of placenta, if any, and guided by the right hand, armed with suitable forceps, introduces into the cavity a bandage of iodoform gauze (50 per cent.) 5 mètres long, by 10 or 12 centimètres wide. The cavity of the uterus is thus packed with the gauze, the left hand being gradually withdrawn; the vagina is then filled, and the end of the bandage, about 10 centimètres long, left outside the vulva. A tampon of antiseptic wool and a wide pad of iodoform gauze is then applied, and a wide binder tightly placed round the body. The plug may be left in for twenty-four to thirty-six hours, and then carefully withdrawn. This means, so contrary to the rules of English practice, he says, 'constitutes an efficacious and continuous means of arousing uterine contractility, and is a perfect hæmostatic agent for the uterine cavity.'

G. D'Arcy Adams, M.D.

1371. *Meredith on the Vomiting in Pregnancy and Menorrhagia.*—The author gives details of some severe cases of vomiting in pregnancy apparently due to drinking contaminated water. After every other means had been exhausted, it was found that a change of drinking-water cured the patient. Several cases of severe menorrhagia were also traced to the same cause. We should hardly think that the menorrhagia was a direct result, but more likely secondary to pelvic congestion caused by the irritation of the impure water on the intestinal tract.

1372. *Some Gynæcological Cases treated by the Faradic Current.*—A series of eight cases are given. The current was administered in various ways, according to the case; sometimes with both poles externally, and in other cases one would be placed over the abdomen, and the other within the uterus, or in one or other *cul de sac* of the vagina. It was found that most benefit followed in cases of subinvolution from the contractions of the uterus caused by the current. Ovarian pain was also relieved. In some instances the relief was only temporary.

J. Inglis Parsons, M.D.

1373. *Hirst on Six Cases of Puerperal Insanity.*—In the last eighteen months the author had met with six cases of puerperal insanity, an unusual experience for an obstetrician, since, according to Fordyce Barker, this condition only occurs once in four hundred cases of labour. Of these six, four were illegitimately pregnant; two had mania, while four presented a melancholic apathetic appearance, and seemed indifferent to all about them. Three of the women recovered their reason; two were apparently hopelessly insane; and one died from a septicæmia which was associated with and perhaps caused, the mental state. One case was sudden in its onset, violent in its manifestations, but short in its duration; the woman was told two weeks after confinement that her perineum was ruptured and would probably have to be sewed together. She almost immediately became maniacal and remained so for about three weeks. [A correct idea of the most common variety of this affection, of the prognosis and the best means of treatment cannot be obtained from an obstetrician's practice, which must necessarily be small; but must be sought for in records of such cases presented by competent observers, who, especially if in charge of asylums, have to deal with a large number of them. Studies of more than 800 of these cases by Clark, MacLeod, and Wiglesworth have recently been published. From them it appears that the maniacal form of the disease is the most common; that a large majority of the cases recover, usually within six months; that when death occurs it is commonly traceable to sepsis, which is so often associated with puerperal insanity, although a few cases die from maniacal exhaustion; that the best treatment is the Weir Mitchell rest cure. Heredity plays a most important part in the etiology of the disease; very often the subject is mentally and physically depressed. It seems not very uncommon for the chorea of pregnancy to develop into insanity; this happened in one of the above cases.—*Rep.*]

1374. *Picqué on a Case of Ventrofixation or Hysteropexia.*—M. B., 32 years of age, was admitted on Aug. 2, 1888, complaining of general fatigue, with a feeling of weight in the lower part of the abdomen, especially when standing or walking. Menstruation was regular. On examination, the fundus of the uterus was found to be in a condition of acute retroflexion, and tender to the touch. The displacement could not be reduced, and, as the patient insisted upon something being done to relieve her suffering, attempts were made, at first daily and then every third day, to restore the normal position of the uterus by means of Trélat's *redresseur*, and with some success; but it was impossible to maintain the improvement, the uterus invariably falling back. Under these circumstances it was decided to resort to more radical measures, and on Sept. 29 the abdomen was opened in the middle line, and the pelvis explored. The uterus was found fixed by adhesions in every direction, from which it was only freed with difficulty. The left Fallopian tube, being enlarged, was removed, with the corresponding ovary. A silk suture was then passed through the left round ligament and through the abdominal parietes, including the peritoneum. A second suture was passed through the broad ligament lower down, and a third below the second. Only two sutures were used on the right side. Having placed the uterus in its proper position, the sutures were tied and the wound closed. There was some vomiting the first day, but subsequently the patient progressed rapidly, and by Oct. 17 was practically well. At the date of the paper, however, she had not yet been allowed to leave her bed, so that the ultimate effects remain to be ascertained.

Alfred S. Gubb.

ANATOMY.

RECENT PAPERS.

1375. Braune, Dr. W.—On the Angulus Ludovici (*Der Sternal Winkel, Angulus Ludovici, in Anatomischer und Klinischer Beziehung*). (*Arch. für Anat. und Ent wick.*, Jahrg., 1888. Heft 5-6, S. 302.)

1376. Wells.—A Remarkable Case of Double Monstrosity. (*American Jour. of Obstetrics*, vol. xxi., p. 1265.)

1377. Guyot-Daubès.—Les Anomalies Dactyles. (*Rev. d'Anthropologie*, September 1888, p. 554.)

1378. Darkschewitsch.—On the Upper Nucleus of the Third Nerve. (*Ueber den oberen Kern des N. oculomotorius* (*Archiv für Anat. u. Entw.*, 1889. Heft i. u. ii. S. 107.)

1379. Dana.—The Cortical Localisation of the Cutaneous Sensations. (*Rep. from Journ. of Nervous and Mental Disease*, October 1888.)

1380. Windle, Professor.—The Pectoral Group of Muscles. (*Proc. Roy. Soc.*, vol. xlv., p. 99.)

1381. Brown, MacDonald, M.B., F.R.C.S.—On the Mammalian Cardiac Ventricles and the Construction of the Ventricles in the Mammalian Heart. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 250.)

1382. Sutton, J. Bland, F.R.C.S.—On the Nature of Ligaments. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 256.)

1383. Humphry, Professor, F.R.S.—On the Neck of the Femur. The Angle of the Neck with the Shaft of the Femur at Different Periods of Life and under Different Circumstances. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 273.)

1384. Paterson, Professor A. M.—On the Position of the Mammalian Limb. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 283.)

1385. Cunningham, Professor D. J.—On the Number of the Ribs: Eight True Ribs in Man. (*Nature*, Jan. 10, p. 248.)

1386. Vignal.—On the Development of the Cortex Cerebri (*Recherches sur le Développement de la Substance Corticale du Cerveau et du Cervelet*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 7, p. 201; No. 8, p. 311.)

1387. Auvard, Dr.—Supernumerary or Supplementary Mammary Glands. (*Arch. de Tocologie*, October 1888.)

Art. 1375. *Braune on the Angulus Ludovici.*—1. By the sternal angle, Louis' angle, Angulus Ludovici, is understood the angle, which, under certain conditions, the surface of the manubrium and the body of the sternum form with one another, whose convexity is directed forwards, and which is recognised as a prominent ridge at the level of the second pair of ribs. This angle has been acknowledged as a diagnostic point for commencing phthisis, as it arises through sinking in of the manubrium, as a result of contraction of the lung. 2. The angle is an example of the adaptation of the thorax wall to the surface of the lung, the former exactly following the elevations and depressions of the thoracic contents. 3. This change of form of the thoracic wall is not only produced by the action of connective tissue, but is chiefly an effect of atmospheric pressure. It occurs also after pleurisy without fibrous adhesions. 4. Experience shows that the sternal angle does not always occur in phthisis, but that it also appears in other lung changes, especially in emphysema. 5. It can be artificially produced through extraordinary inspiratory action of the ribs, after cross section of the sternum into its separate segments. 6. The sternum is a checking apparatus for the ribs when it has become a single fixed bone, and the ribs also check the movement of the sternum. 7. After separation of the manubrium the lungs can be distended much further than formerly, and then the manubrium, freed from the restraining body of the sternum, moves further outwards with the formation of a sternal angle. 8. The sternum gapes after a traumatic injury; the dislocated fragments of the fracture may, under certain conditions, form a bony fissure; sometimes they act as a constrictor of the thorax, preventing too great inspiratory movements of the upper ribs. 9. The sternal angle occurs through great inspiratory movements, and also sometimes in emphysema when that arises early in a pliant condition of the sternum. 10. This does not exclude the occurrence in rare cases of the formation of an angle when there is a high degree of shrinking of the apices of the lungs with great localisation, through insinking of the manubrium with a fixed body of the sternum.

1376. *Wells on a Case of Double Monstrosity.*—The subject is a female, whose case has attracted a considerable amount of attention from the fact of pregnancy having occurred in one of the pelves. She possesses a well-formed single body, with normal upper extremities. The trunk broadens out below the waist, having two umbilici, and bifurcating at the pelvis, where there are four lower limbs, all of which spring from the same horizontal and vertical plane. The spinal column divides at the third lumbar vertebra, the two pelves being fused by the junction of their respective ilia. There are two pelvic arches supplying four limbs, two pubes, two montes veneris, two perfect sets of external and internal female generative organs, two bladders, two ani and two lower intestines. The outer limbs on which the woman walks are well developed, though the foot of the right is in a condition of equino-varus. The inner limbs are smaller, atrophied from disuse, and below the knee very rudimentary. [*Note.*—This very interesting and probably unique case, the origin of which does not seem to have been rightly appreciated by its narrator, is an excellent example of the condition described, and most satisfactorily explained, by Professor Cleland in his paper 'On Birds with Supernumerary Legs,' published a year or more ago in the *Proceedings of the Glasgow Philosophical Society*, and recently republished in *Memoirs and Memoranda in Anatomy*, vol. i.—*Rep.*]

1377. *Guyot-Daubès on Digital Anomalies.*—The author commences his study with an account of the condition of ectrodactyly. Complete absence of digits is rare; there are several instances of monodactyly, the index being generally the persistent finger. Di-, tri-, and tetradactyly are more common. He quotes an interesting case of the transmission of this condition through three generations, from the account given by Dr. Verneau in *La Nature*, Sept. 17, 1887. The father possessed the normal number of digits on hands and feet, but in every case there was absence of the ungual phalanx. He married a normal female, and amongst other children they had two with a deficient number of digits on hands and feet :—

Élisa	R. hand	3 digits
	L. ,,	3 ,,
	R. foot	2 ,,
	L. ,,	2 ,,
Marie	R. hand	1 digit
	L. ,,	1 ,,
	R. foot	2 digits
	L. ,,	2 ,,

In spite of the deficient condition of their digits, both married. Élisa had one daughter named Marie, and Marie (the aunt) three, all four being affected in different degrees.

	Marie (Daughter of Élisa)	R. hand	2 digits
		L. ,,	2 ,,
		R. foot	2 ,,
		L. ,,	2 ,,
Daughters of Marie	**Anatalie**	R. hand	2 ,,
		L. ,,	2 ,,
		R. foot	2 ,,
		L. ,,	2 ,,
	Clémence	R. hand	1 digit
		L. ,,	1 ,,
		R. foot	2 digits
		L. ,,	2 ,,
	Delphine	R. hand	2 ,,
		L. ,,	1 digit
		R. foot	2 digits
		L. ,,	2 ,,

Further portions of the paper deal with webbing of the digits and polydactyly. The concluding pages are devoted to the consideration of the origin of the malformations and their relation to the question of evolution.

1378. *Darkschewitsch on the Upper Nucleus of the Third Nerve.*—In the upper corpora quadrigemina, along the floor of the aqueduct of Sylvius, on each side of the middle line lie two groups of cells, of which the inferior is nearest to the middle line, the superior more external. The inferior is the classical nucleus of the third nerve, but the superior is also connected with its root. The two nuclei are to be separated not only on account of their different position, but also of their size, and should be distinguished as the under or large-celled nucleus and the upper or small-celled. The upper nucleus has at least three connections. First, it stands in near relation with the fibres of the posterior longitudinal bundle; secondly, it is in direct connection with the pineal body, by means of the fibres of the ventral part of the posterior commissure of the brain; and, thirdly, it is closely connected with the so-called lenticular nucleus loop, since a part of the fibres of this system take origin from the upper nucleus of the oculo-motorius.

1379. *Dana on Cortical Localisation of the Cutaneous Sensations.*—The paper discusses the question from the points of view of (1) clinical observation and pathology; (2) experiment; (3) embryology; (4) teratology; (5) comparative anatomy. A digest of the facts observed in 134 cases with a valuable bibliographical table are given. The following conclusions are arrived at:—The cortical areas for touch, pain, and probably temperature, are identical with the motor areas. The representations for the different parts of the cutaneous surface are, in the main, identical with the corresponding motor segments. The areas for the different segments overlap and diffuse into each other. The brain cortex of the left hemisphere, except the island of Reil, shows lesions causing sensibility disturbances twice as often as the right. The anæsthesia produced by lesions in these areas is partial, as a rule; it may be total for a limited area, but never total for the entire half of the body. The anæsthesia from cortical lesion is limited to or more pronounced in certain parts of the opposite side, such as the face, arm, or leg. Slowly developing lesions, like tumours, are especially apt to cause paræsthesia or sensory auræ if there is epilepsy. Sudden or extensive softening causes the most marked and profound forms of anæsthesia. This softening need not necessarily be deep, but is often so. Pressure lesions, like superficial clots, can cause some anæsthesia, but always with pronounced hemiplegia. Superficial syphilitic and tubercular lesions may cause partial anæsthesia. No case of pure lesion of the limbic lobe has yet been observed (and reported) in which anæsthesia was produced. This lobe, or a part of it, is probably the seat of olfactory sensation. The comparatively slight involvement of sensibility in lesions of the motor cortex has yet to be satisfactorily explained. It may be that each body segment has a larger area of representation on the cortex for sensation than for motion; or it may be that each segment is represented to some extent in both hemispheres, and hence compensation easily occurs. It is just possible that there is some sensory function in the limbic lobe. The occurrence of slight sensibility disturbances, with spasms and paralysis, points to lesions high up near or in the cortex. Profound hemianæsthesia, with or without motor symptoms, points to a lesion lower down in the internal capsule or still nearer the cord. Hemianæsthesia is always accompanied with some spasmodic or paralytic symptoms.

380. *Windle on the Pectoral Muscles.*—The pectoral group of muscles is considered as consisting of three sectors, from before backwards, anterior or manubrial, supplied by external anterior thoracic nerve, middle or gladiolar supplied by internal anterior thoracic nerve, posterior or abdominal supplied by lateral thoracic nerve. This segmentation is of primary importance as shown by the nerve supply. Each of these segments may be laminated so that there may be a deep manubrial, a deep gladiolar or costal, and a deep abdominal. The lamination is of secondary importance. The relations and connections of these are very variable amongst mammals. The following is suggested as the morphology of the group in man:—Superficial manubrial: clavicular and anterior part of pectoralis major, sometimes separate from the remainder of the muscle. Deep manubrial occasionally present, as the pectoralis minimus of Wenzel Gruber. Gladiolar: posterior, non-reflected part of pectoralis major. Costal: double (1) pectoralis minor, (2) deep reflected part of pectoralis major. Abdominal: occasionally present as pectoralis quartus, or as some of the forms of achselbogen.

1381. *Brown on the Mammalian Cardiac Ventricles.*—In the above-mentioned article Dr. Brown makes some interesting remarks with regard to the so-called moderator band of King in the right ventricle. Out of 100 hearts examined he never found it once absent, though in fifteen cases its septal attachment was so low down as to almost give it the appearance of an ordinary trabecula. In every case it was a muscular band. Arising in common with the anterior papillary muscle near or at its base, it passes obliquely upwards and inwards, and becomes attached to about the middle of the septum, rather nearer its anterior than its posterior aspect. Its size varies much. It was found 1½ inches in length and almost as thick as the little finger, at other times attenuated and short. Its septal attachment may be simple or radiating. But while its septal end thus varies both as regards character and position, its connection with the anterior muscle is constant. A second smaller band sometimes exists, attached to the ventricular wall nearer the apex, which either passes across to the septum independently, or more commonly after a short distance blends with the larger one. Amongst mammals this moderator band is almost invariably present. Dr. Brown believes that the band acts indirectly as a 'moderator,' and that through the anterior papillary muscle. He is also of opinion that a well-formed moderator band will serve largely by its contraction to direct the blood stream towards the pulmonary orifice. In many specimens of dilated right heart, in which only the initial stage of the lesion had been reached, he found that the dilatation existed only posterior to the muscle and its accessory band. In a more advanced stage the cavity was dilated almost equally.

1382. *Sutton on the Nature of Ligaments.*—Mr. Sutton continues his observations on ligaments in this paper, by dealing as follows with certain structures connected with the larynx:—1. The true vocal cords, or the inferior thyro-arytenoid ligaments, arise from the tendinous metamorphosis of those fibres of the thyro-arytenoid muscles subjacent to the laryngeal mucous membrane. 2. The false vocal cords, or the superior thyro-arytenoid ligaments, represent, with the cuneiform cartilages in a degenerate manner, an old communication between the epiglottis and the corniculum laryngis; the corniculum is in itself a vestigial structure in most mammals. 3. The hyo-epiglottidean ligament in the human subject is the fibrous representative of a well-formed muscle in many mammals.

1383. *Humphry on the Neck of the Femur.*—1. The angle formed by the neck of the thigh-bone with the shaft varies considerably in different persons at any given period of life. 2. It is smaller in short bones than in long bones; and it is also most likely to be small when the pelvis is wide; the combination of these two conditions rendering it usually smaller in women than in men. 3. The angle decreases during the period of growth; but after growth has been completed it does not usually undergo any change, even if life be continued to extreme old age. Some change may take place in exceptional cases, but as a rule the angle remains the same from the adult period till death, at whatever age that may occur. 4. If during growth the limb be relieved of the weight of the body, as in the bedridden state, in paralysis, or in a stump, the angle of the neck with the shaft usually retains the open form of early life, or even may become wider.

1384. *Paterson on the Position of the Mammalian Limb.*—1. The segmental spinal nerves which enter and supply the limb afford the most trustworthy evidence regarding its original position. 2. The limbs may be regarded as outgrowths from the ventral and lateral aspects of certain somites, and from so much of these as agrees with the distribution of the inferior primary divisions of the corresponding nerves. 3. From the evidence afforded by the nerves, the position of the mammalian limb is not constant in relation to the longitudinal axis of the body. 4. The position of the fore limb varies only slightly, but it shows a tendency to shift towards the hinder end of the body. 5. In mammals, with an abnormal number of cervical vertebræ, the irregularity is due, not to the interpolation or omission of vertebræ, but to a shifting of the limb, and a correlated difference in the development of associated parts. 6. The position of the hind limb is less constant, while it may retain its embryonic position; in most cases it displays a tendency to move backwards. 7. The 'sacral' vertebræ, in consequence of this shifting of the limb-girdle, may not be strictly homologous with the corresponding bones in another individual or species. They simply serve a similar purpose in supporting the limb-girdle. 8. In certain exceptional cases, as in man, there is a tendency in the hind limb for a shifting forwards of the limb-girdle in relation to the sacral skeleton, along with a concomitant shortening of the vertebral column.

1385. *Cunningham on the Number of the Ribs.*—Professor Cunningham states in a note that one of his demonstrators, Mr. Robinson, has examined thirty subjects with a view to ascertain the number of true ribs in each. In five of these subjects the eighth costal cartilage was found united to the sternum. In four subjects (two male, two female) the eighth cartilage of the right side alone showed this condition; in the remaining case (male) the eighth cartilage on each side reached the breast-bone, and articulated with its fellow in front of the upper part of the xiphi-sternum. The anomaly is more common in negroes. It is the typical condition in the chimpanzee. The orang has seven true ribs. In the gibbon the cartilage of the eighth rib, although it is long and rests by its tip against the xiphi-sternum, does not articulate with the sternum.

1386. *Vignal on the Development of the Cortex Cerebri.*—The cells originally forming the cerebral vesicles rapidly lose their epithelial character, except in the innermost parts, and become irregular cells with fairly well developed protoplasm, which constitute the embryonic grey substance. In this substance it is impossible to recognise the cells which will become the cells of the neuroglia. The embryonic grey substance continues to increase in thickness up to the fifth month of intra-uterine life without altering its intimate structure. However, from the first month the first layer of Meynert, fibrillar layer, has made its appearance; and between the second and third month the white substance commences to develop. At five and a half months the layer of large pyramidal cells makes its appearance in the middle of the embryonic grey substance; the cells of this layer, however, do not become very clear until the eighth month. The cells of the second layer, or layers of small pyramidal cells, appear at the same epoch. At the ninth month the cells of the fourth and fifth layers appear, and the aspect of the brain is the same as that of the adult, save for the absence of the arched fibres. The cells of the neuroglia only differentiate themselves from the embryonic cerebral cells during the sixth month; but they do not become very clear until during the eighth. The elements of the grey substance of the cerebellum undergo at the commencement the same transformations as those of the cerebrum. At the sixth month the cells of Purkinje make their appearance, and perhaps also those of Dexissenko. At the eighth month the former are very clear, but do not yet possess the axial prolongations. Finally, at the ninth month, the cerebellum presents quite the aspect which it has during adult life, save that the granular layer is infiltrated at its superior part by migratory cells, and that the small ganglionic cells situated at the base of this layer are not visible.

Bertram C. A. Windle, M.A., M.D.

1387. *Auvard on Supernumerary or Supplementary Mammary Glands.*—Dr. Auvard cannot find any case where more than five mammæ were observed on the same woman, just as no woman has borne more than five children at the same time. The two maxima support the theory that in our species, as in other mammals, the number of mammæ indicate the number of offspring which can be borne at one gestation. Supernumerary mammæ are almost always found near the normal breast, in the direction of the axilla, rarely in the epigastrium, shoulder, or thigh. The alleged cases of mammæ on the back have not been properly authenticated. Geoffroy Saint-Hilaire and Darwin held that supernumerary mammary glands were developed independently of the normal mammæ. Puech held that they were diverticula of the natural breasts. Against the first theory, Dr. Auvard opposes the fact that galactophorous ducts have been found between the normal and the abnormal mamma, the latter diminishing in size after lactation from the former. Puech's theory does not account for the development of the nipple. Dr. Auvard solves the difficulty by dividing supernumerary mammæ into two groups. The first group consists of those which are accessory (*dépendantes*) to the natural gland and devoid of nipples. Thus they correspond to Puech's theory. The second group includes independent mammæ bearing nipples. This group corresponds to Darwin's theory. Dr. Auvard describes four cases of accessory axillary mammæ, tender and diminishing in size after lactation. [A table of references with notes on the number of mammæ in the lower animals will be found in the London Medical Record, vol. xiii., 1885, p. 319. Dr. Auvard has overlooked Dr. Champneys' monograph on the *Development of Mammary Functions by the Skin of Lying-in Women*, a condition distinct from the two varieties distinguished by Dr. Auvard. *See* London Medical Record, vol. xiv., 1886, p. 193.—*Rep.*]

Alban Doran.

DERMATOLOGY.

RECENT PAPERS.

1388. Chiappa,—On the Diagnostic Value of the so-called Hyaline Globules in Rhinoscleroma. (*Giornale Italiano delle Malattie Veneree e della Pelle*, June 1888.)

1389. Obtusowicz, Dr. Ferd.—On Cornu Cutaneum. (*Med. Chirurg. Rundschau.*)

1390. Brocq, Dr.—On New Varieties of Alopecia. (*Rev. de Thérap.*, November 1888.)

1391. McHARDY.—A Case of Combined Anchyloblepharon and Partial Symblepharon cum Corneâ. (*Illustrated Med. News*, September 1888, p. 3.)

1392. DUHRING.—Two Cases of Typical Impetigo Simplex. (*American Journal of the Medical Sciences*, October 1888, p. 374.)

1393. HANDFORD.—On Stearrhœa Nigricans. (*Illustrated Medical News*, December 1888, p. 293.)

1394. ATKINSON.—On Ichthyosis Linguæ. (*Illustrated Med. News*, November 1888, p. 195.)

ART. 1388. *Chiappa on the Diagnostic Value of the so-called Hyaline Globules in Rhinoscleroma.*—Prof. Pellizzari, in 1882, was the first to call the attention of dermatologists to the presence of these rounded globules of hyaline or colloid degeneration in the tissues of rhinoscleroma. He attributed to this degeneration the special appearance which the cells of the new growth take on, as well as that of the cellular elements of the normal tissues. He admitted that some of these highly degenerated cells broke down to form a viscid liquid. Mikulicz thought that the change was a fatty degeneration, but Pellizzari showed that it was unaffected by ether, alcohol, acetic or formic acids, caustic potash, &c., and that the degenerated elements stained well with carmine. He states that he has found these rounded elements sometimes isolated, sometimes in groups of two, three, or more, of variable size from that of the surrounding cells to twice as large, homogeneous, strongly refracting the light, and closely resembling drops of fat. Cornil and Alvarez in 1885 described these bodies afresh and attributed to them the greatest diagnostic importance. Other observers since then have expressed the opinion that the presence of these hyaline bodies in tissues of a chronic inflammatory type, is sufficient evidence of rhinoscleroma. The author found an abundance of these bodies in the tissues of an atonic ulcer of the vulva, in a woman aged 24, at the Institute for Syphilis at Pisa. They were uninfluenced by the usual solvents of fat, and stained well with fuchsine, methyl violet, &c. They were also found in another case of ulcer of the vulva and orifice of the urethra; in a case of 'elephantiasis of the right labium minus;' in sycosis of the upper lip; in acne hypertrophica; and in elephantiasis of the legs. In all these cases the hyaline globules always occupy the derma, or true skin, and by preference the deeper parts of the papillary layer. They are generally found where there is an accumulation of embryonic cells and giant-cells. Hence it is not difficult to find groups of these bodies in the vicinity of the smaller blood-vessels, or near the sebaceous glands, as in the case of acne; or near the ducts of the sudoriparous glands as in the case of elephantiasis of the labium minus. Hence the author comes to the following conclusions:—These hyaline globules or bodies are not special to rhinoscleroma, but can be found in other new formations of a chronic inflammatory nature. They are therefore of no diagnostic value, and more especially are they valueless in attempting to distinguish between sycosis or acne and rhinoscleroma. H. HANDFORD, M.D.

1389. *Obtusowicz on Cornu Cutaneum.*—Dr. Obtusowicz observed a cornu cutaneum, 7 centimètres in length, in the occipital region of a woman, aged 64 years. This dermatological anomaly is so exceedingly rare that Professor Hebra in his long experience had observed but three similar cases, and only one in which the cornu cutaneum was situated on the dorsum penis of a man. The cornu in the three cases was, however, but 1½ centimètres in length, and that on the dorsum penis 4 centimètres. Lebert reports 109 cases, and the first authoritatively recorded cases date back to the thirteenth century. The cornu observed by Obtusowicz, which had been developed within two years, was situated exactly on the spot where women fasten the hair with pins and combs. Without doubt the long-continued irritation of the skin must be regarded as the etiological factor in this uncommon anomaly. The base of the cornu measured 1 centimètre in diameter, and at a distance of 1 centimètre from the base the cornu was bent to the left upwards. At the distance of 1 centimètre from the base the diameter was half a centimètre. Again, at a distance of 3½ centimètres it grew thicker, and it terminated in a clavated form. The cornu, which had the appearance of a curved horn, was ribbed; and its colour showed all shades, from light yellow to wax yellow and yellowish brown, until near to the club end it was chestnut-brown and blackish. The skin in the immediate neighbourhood was quite normal. The operation was simple and easy, with very slight hæmorrhage. Healing was immediate. When cut through lengthways the cornu was very hard, being formed of concentric layers, which shone like horn. In the centre there was a solid crumbly substance. JOHN ELLIOTT.

1390. *Brocq on New Varieties of Alopecia.*—M. Brocq calls attention to a group of diseases of the scalp which resemble each other in producing rapid and incurable baldness. They begin with follicular and perifollicular inflammation, causing destruction of the papilla and the formation of cicatricial tissue, the patches being more or less symmetrically arranged. There are three principal varieties: 1. Pseudo-pelada, in which, when the hair has fallen, the scalp is of a dead white colour. 2. Folliculitis, leaving a soft, smooth cicatrix, &c. 3. Lupoid sycosis, in which the groups of inflamed follicles form a pustulous, scabby, and desquamating mass, with abundant formation of cicatricial tissue, often resembling keloid. ALFRED S. GUBB.

1391. *McHardy on a Case of Combined Anchyloblepharon and Partial Symblepharon cum Corneâ.*—In the *Illustrated Med. News*, September 1888, p. 3, Mr. McHardy records the following case, which was due to an accident from lime. The anchyloblepharon, or cicatricial union between the lid edges, from almost right up to the internal commissure, was divided and prevented from re-forming by freeing the skin and mucous lining of the upper lid, and stitching these together over its raw edge. The partial symblepharon, or traumatic adhesion between the ocular and palpebral conjunctiva, was treated after Teale's method. The symblepharon was divided along the line of the corneal margin, and dissected down and back off the surface of the globe, until the full range of independent movement was possible for both the eyeball and its lower lid. The raw ocular surface thus exposed was then entirely covered by a pair of interlocking flaps of conjunctiva, which were transplanted from around the inner and upper and the lower and outer thirds of the cornea. The flaps were kept in their new position, and the edges of wound, from which they had been borrowed, were drawn together by fine coloured silk sutures. The operation was completely successful, and was materially facilitated by the use of sutures of distinguishing colours; this minimises the difficulty of making sure that a conjunctival flap is not being adjusted with its wrong surface forwards. In many difficult operations for extensive symblepharon the author has derived immense advantage from dividing the external canthus freely and temporarily securing either or both lids well out of the way, by a stout suture passed through the edge, during the time that is occupied in fashioning, transplanting, and suturing the conjunctival flaps. These little details are of great value in securing a successful result in many cases where, without an operation, the eye would have to be sacrificed.

1392. *Duhring on Two Cases of Typical Impetigo Simplex.*—In the *American Journal of the Medical Sciences*, October 1888, p. 374, Dr. Duhring contributes notes of two cases of typical impetigo simplex. Considerable scepticism prevails concerning the existence of a distinct disease such as impetigo. Many regard it as a form of pustular eczema, impetigo contagiosa, or as a lesion due to irritants, or to external irritants. The author records these cases because he has been lately quoted by Dr. Colcott Fox as advocating the existence of this disease, of which he does not believe. The first case was that of a boy, aged 4 years, whose mother stated he had never been ill before. Two weeks before the author saw him the irritation began, and was soon followed by 'whitish lumps.' Shortly after pustules appeared, a few at a time, lasting several days, and drying up. They took from three to five days to mature. When seen, there were about two dozen pustules, situated upon the fingers, toes, and legs, varying in size from small to large split peas, semiglobular or dome-shaped, and raised about a line above the surrounding healthy skin. They were mostly of a pale yellow colour, and seated upon extensive bright reddish, highly inflammatory, non-indurated bases; they were discrete, and manifested no tendency to aggregate or group. In the course of a few days crusts formed, and rapidly dropped off, leaving a reddened surface, which soon disappeared. No treatment, local or internal, was applied. The second patient was also a healthy boy of 4 years, and ran a similar course. Both these cases show a distinct disease, with lesions of a pustular nature not to be confounded with any other disease. The process is a simple and benign one, and is not contagious, possessing none of the characteristics of eczema. The disease corresponds to the 'impetigo sparsa' of Bateman, Wilson, and Hilliairet and Gaucher; and has also been described in America by Hyde, Robinson, Buckley, and Van Harlingen.

1393. *Handford on Stearrhœa Nigricans.*—In the *Illustrated Medical News*, December 1888, p. 293, Dr. Handford describes an affection of the skin closely allied to *acné sebacée, concrété*, or *cornée* of the French writers, and more closely to *stearrhœa nigricans* of Wilson. The paper is illustrated by splendid photographs and drawings of microscopic sections showing the characters of disease. The author has met with two cases in old people, both of whom were exceedingly dirty and had been affected for years. One was the subject of scirrhus cancer of the breast, and the other had symptoms of cancer of the stomach. On the skin of the back, neck, and abdomen there were numerous raised, rounded, sharply circumscribed patches, varying in size up to that of a shilling or larger, and in colour from light brown to black. The colour was largely due to dirt, and on examining the surface numerous plugs of hardened sebaceous secretion were seen, and the interstices were occupied with hypertrophied epithelium, so that the surface was rendered fairly even, and resembled a black disc about one-sixteenth of an inch thick, adherent to the skin. This could be scraped off with a paper-knife, and was found to consist of fatty *debris*, epithelium, and cholesterin. It left, however, a reticulated bleeding surface behind, showing the implication of the epidermis and the papillæ of the true skin. The affection was readily cured by the application of strong carbolic acid. Part was snipped off with scissors, and sections of it were stained with picrocarmine and examined microscopically. The sebaceous ducts and hair follicles were widely dilated, and occupied by indurated sebum. The cuticle was slightly thickened. 'The stratum lucidum and the stratum granulosum, or pickle-cell layer, were greatly thickened, and contained numerous rounded spaces, the margins of which were lined with cells of cubical shape, and in some places elongated and approaching a columnar form.' The proliferation of, and the processes arising from the deeper layers of the epidermis, strongly resembled a commencing epithelioma. This tendency of the epithelium to proliferate and invade adjacent structures was strongly suggestive of carcinoma, and yet the course of the skin affection made it quite evident that it was not in any way cancerous. The author has also met with a similar case in a child aged 5 years. It had *pediculi capitis*, and on the head were three bald rounded patches, depressed below the level of the surrounding scalp, devoid of hair, cicatricial looking, and partially covered with crusts. These crusts were apparently sebum, and on removal left deep holes, which were the dilated sebaceous follicles.

1394. *Atkinson on Ichthyosis Linguæ.*—In the *Illustrated Med. News*, November 1888, p. 195, Mr. Atkinson records a case of this rare condition. The patient, a miner, aged 69, was admitted under the author's care in May 1888. He had noticed a white pimple about four years previously on the dorsum of the tongue; it spread slowly, but was never very painful. There was no history of syphilis; he had very bad teeth, and had been rather a heavy smoker. On admission the tongue was the seat of an extensive growth, white in colour, which extended over rather more than two-thirds of the anterior part of the dorsum and curved round the edges and tip, being nearly symmetrical. It looked as if each individual papilla were hypertrophied, or, more correctly, as if the epithelium over each papilla were very much increased and heaped up. There was no glandular enlargement, and removal was agreed to. On May 31, 1888, having first performed laryngotomy and plugged the pharynx with a sponge, the author proceeded to divide the mucous membrane at the floor of the mouth, and the genio-hyo-glossi muscles with scissors; the tongue being well drawn out, the ranine arteries were divided and secured singly, the section being completed by scissors. The stump, which was secured by a silk ligature and fastened to the cheek, was dressed with iodoform and gauze. The tube was removed the same evening, and the laryngotomy wound, together with stump, healed very quickly. In 1874 Mr. Fairlie Clark read a paper on this subject at the Medico-Chirurgical Society, the general points of which are as follows:—The disease chiefly affects males, and about middle age;

there does not seem to be any connection with syphilis. If left alone it ends in epithelioma, and should always be removed as soon as diagnosed. Microscopical examination of the author's case showed that the changes were confined to the mucous, submucous, and papillary layers, and that the characteristics of epithelioma were absent.

RICHARD NEALE, M.D.

BACTERIOLOGY.

RECENT PAPERS.

1395. MUSKATBLUTH, BUCHNER, AND OTHERS.—On the Absorption of Morbific Germs by Inhalation (*Sur l'absorption par inhalation des germes morbides*). (*Ann. Pasteur*, No. 1.)

1396. CHAMEAU.—On the Mechanism of Immunity (*Sur le mécanisme de l'immunité*). (*Ann. Pasteur*, No. 2.)

1397. HESSE AND OTHERS.—On the Theory of Phagocytosis. (*Centralbl. für Bact. und Paras.*, Band iii., Heft 8.)

1398. SAKHAROFF, DR. NIKOLAI A.—The Morphological Resemblance of Malarial Parasites to those of Relapsing Fever. (*Vratch*, No. 1, 1889, p. 1.)

1399. MACKENZIE, G. HUNTER.—On the Influence of Certain Medicinal Agents on the Bacillus of Tubercle in Man. (*Edin. Med. Jour.*, January 1889.)

1400. KRAUS, DR. C.—The Differential Diagnosis between Cholera and Arsenical Poisoning. (Friedreich's *Blätter f. Gericht. Med.*, Heft iv., 1888.)

1401. PETERS.—Encapsuled Gregarines in Diphtheritic Membranes. (*Münch. med. Wochensch.*, No. 1, 1889.)

ART. 1395. *Muskatbluth, Buchner, and Others on the Absorption of Morbific Germs by Inhalation.*—The latest experiments of Muskatbluth and Buchner on the introduction of the anthrax bacillus through the lungs confirm those of Koch, Cadeac, and Mallet on the inhalation of tubercular dust. Micro-organisms have the power of penetrating the surface of the lungs at any point of mechanical lesion, of passing into the lymphatic channels, and thus of multiplying themselves in the deeper structures. The failures of Wysokwich with pulverised cultures of the typhoid bacillus, the staphylococcus, and other microbes were clearly owing to the pulmonary inflammation set up during the experiments, which arrested the development of the inhaled micro-organisms. In order that pulmonary inhalations of infective dusts should be successful, it is essential that they should reach the ultimate alveoli, for which they must be extremely fine and perfectly dry; the pulmonary inflammation, though it cannot be altogether avoided, must be reduced to a minimum, and, to ensure this, the smallest possible quantity of the dust should be employed. The failures of Cadeac and Mallet were due to their having made use of materials insufficiently desiccated or pulverised, and having exposed the animals to too prolonged inhalations.

1396. *Chameau on the Mechanism of Immunity.*—The immunity acquired as a result of previous infection is brought about by the impregnation of the organism with the soluble virus or some other dissolved residual matters arising from the evolution of the original microbes. Two principal facts tend to establish this assumption:—1. The intensification or the reverse of the effects produced by certain infective agents, according as one inoculates them in larger or smaller quantities. 2. The constant immunity possessed by lambs born of ewes inoculated with anthrax (in an attenuated form) during the last weeks of gestation. The author insists specially on his own experience as regards the latter fact, since Strauss and Chamberland have endeavoured to invalidate it. He shows how, conformably with the physiological law established by Davaine and Brauëll of the impermeability of the placenta of sheep to bacilli, he was never able to detect the presence of the anthrax bacillus in the fœtuses of sheep inoculated with charbon; that in the fœtuses of animals dying of anthrax he never observed the ordinary lesions of this disease, even when their cardiac blood was proved to be highly poisonous, and that in those rare cases (seven out of forty at the most) in which various infective agents existed in the fœtal blood, there were merely a few erratic bacilli, derived directly from the parent, and incapable, or nearly so, of multiplying themselves in the young animal. Probably in these instances the fœtus had been impregnated with the material supplied by the parent at a time when the multiplication of the bacilli had advanced so far as to induce conditions favourable to transplacentary penetration.

1397. *Hesse and Others on the Theory of Phagocytosis.*—Hesse, having injected small quantities of staphylococcus pyogenes aureus into the substance of the cornea of cats and rabbits, was able to observe phagocytosis by the white corpuscles and by the cells of the conjunctiva, the more marked the more rapidly the swelling proceeded towards recovery, and more so in cats than in rabbits. The application of moist heat at first favoured the multiplication of the cocci, but later the activity of the leucocytes in their destruction. Christmas-Dircking-Holmfeld employed anthrax cultures, and observed essential and indisputable differences in the consequences of the inoculations depending on the relative susceptibility of the animals to the pathogenic materials, and also that the intensity of the inflammatory reaction was inversely as this susceptibility. He agrees with Metschnikoff in viewing the suppuration as a salutary reaction on the part of the organism against the pathogenic germs introduced into it, but differs from him in regard to the potency of pus, in which he maintains that the microbes die without the intervention of cellular forces. In fact, he quite exceptionally observed any penetration of the pus-cells by the bacilli of anthrax, although he was able to watch the destruction of the bacilli in the course of one, two, or three days in pus removed from the body and kept in tubes at the temperature of incubation, under conditions under which the leucocytes certainly could not have preserved their vitality. Baumgarten does not look on phagocytosis as a cause of immunity, nor does he ascribe any importance to any non-cellular action or forces present in pus in the destruction of microbes. For he found that, when experimenting on susceptible animals with the anthrax bacillus, the fatal termination was not averted by the advent of suppuration at the point of insertion; and, on the other hand, in protected or insusceptible animals the bacilli died in a short time, though no such suppuration was set up. Metschnikoff, in six cases of relapsing fever in monkeys, was able to watch the spirilli disappearing from the blood by degrees as the pre-critical period of elevated temperature approached, until during the crisis and the apyretic stage they were found all collected in the spleen, enclosed in the leucocytes of that organ. Portions of the spleen, taken during the apyretic stage in the period of intermission and inoculated into other animals, reproduced the disease. From these results the author endeavours to combat the two principal objections urged against his theory of phagocytosis—viz.: (1) that in certain diseases ending in recovery, as relapsing fever, the struggle between the leucocytes of the blood and the bacteria has not been seen, and (2) that the penetration of bacteria into cells occurs sometimes when these are already perished, and can behave only as indifferent foreign bodies. [Baumgarten's observations prove nothing; the bacilli would necessarily perish in an insusceptible organism, while in a susceptible one they have, no doubt, extended far beyond the point of inoculation before suppuration there has had time to set up.—*Rep.*] E. F. Willoughby, M.B.

1398. *Sakharoff on Malarial Hæmatozoon and Spirochæte.*—In a preliminary note in the *Vratch*, No. 1, 1889, p. 1, Dr. Nikolai A. Sakharoff, of Tiflis, details some interesting observations on the hæmatozoon living in the blood of malarial patients. When examined just after a paroxysm, the blood proves to contain in large numbers peculiar amœboid bodies 'having enormous dimensions, some individuals being as large as twenty red blood-corpuscles put together, or even still larger.' The parasite consists of an extremely fine, light protoplasm containing numberless dark, roundish, equally-sized, sharply-contoured, mobile granules, and a uniformly greyish nucleus as large as one or two blood-corpuscles. As prolonged (ten hours') observations show, the hæmatozoon may undergo a most curious transformation. At this or that portion of the parasite there appears a protoplasmatic process which subsequently separates itself altogether to transform into a bright homogeneous grainless body with exceedingly fine outlines. The size of such bodies greatly varies. In course of time, some of them penetrate into red blood-corpuscles, increase in size, develop pigment granules, and gradually pass into the ordinary adult form mentioned above, while other bodies, having a smaller size, coalesce to form threads closely resembling the spirochæte of relapsing fever, and differing from the latter only in their being somewhat thicker, and in their performing comparatively slower wave-like movements. The intra-corpuscular hæmatozoa (which are identical with Laveran's malarial parasite) are said to be best examined in the blood taken from the spleen on the second day of the patient's apyretic state.

V. Idelson, M.D.

1399. *Mackenzie on the Influence of Certain Medicinal Agents on the Bacillus of Tubercle in Man.*—Dr. Hunter Mackenzie contributes a paper on the influence of certain medicinal agents upon the bacillus of tubercle in man, as a communication to the British Laryngological Association. He discusses the exact relation of the presence of the tubercle-bacillus to the disease in the lung or larynx, and shows that the micro-organism may be present in the sputa of persons for several years without any definite signs of phthisis making their appearance. Although indicative of the tubercular changes in the tissues from whence they are derived, the bacilli give no indication as to the quiescence or activity of those changes. Nor do the numbers of the bacilli found in any given case indicate the extent or degree of the disease. In the larynx, however, the bacilli are rarely met with except in cases of definite and progressive changes, but it is doubtful whether they are derived from the purulent sputa from the diseased lungs, since they may occur with very little evidence of lung-mischief, and are often absent when grave degeneration is going on in the lung. Of the various methods which have been tried for the annihilation of the bacillus Dr. Mackenzie speaks with impartial scepticism. That climatic influences have no destructive action upon the bacilli has been proved again and again. The climates of low temperature, and with a minimum of variation, would seem to promise the best, but results even in such climates as these are by no means conclusive that any positive action is exerted. Even less can be said of the action of general drugs. Local treatment with a view of destroying the vitality of the micro-organism has not been successful hitherto, nor is it likely that any measure of success will be obtained until an agent can be found which shall act at once actively on the bacilli and passively upon the tissues in which it exists. The bacillus itself is most difficult to influence even when isolated, and is only to be completely annihilated by means which are inapplicable within the human body. Iodoform, corrosive sublimate, and a host of other germicide agents have been employed locally in laryngeal tubercle without any satisfactory result.

E. Clifford Beale, M.B.

1400. *Kraus on the Differential Diagnosis between Cholera and Arsenical Poisoning.*—It is well known that in acute poisoning by arsenic the symptoms may closely resemble those due to cholera, while the pathological appearances may be compared with those after the cholera typhoid stage. The differential diagnosis of the author rests on bacterial cultivations made from the intestinal evacuations, for the purpose of ascertaining whether or not Koch's comma-bacillus is present. Arsenic was given to guinea-pigs, but 'rice-water' discharges could not be obtained, so the author used dogs and cats for his experiments. The following results were obtained:—1. The morbid alterations after arsenic-poisoning consist essentially in a more or less severe gastro-enteritis. 2. They differ from those which ensue in the algid stage of cholera, the intestinal contents being markedly different. The evacuations never assume the 'rice-water' character of those due to cholera, and the bacterial cultivations differ according to the amount of arsenic given. After a very large dose no bacteria develop, although the gelatine is fluidified (from ferment-action). If the dose is smaller, the *bacterium coli commune* alone results, all other usual bacteria being absent. With moderate doses, the number and kind of bacterial colonies is unaltered from the normal. No vibriones were seen; Koch has found this true in arsenical poisoning in man. The morbid alterations after arsenic-poisoning have been given by Virchow (*Gesammt. Abhandl. aus dem Gebiete der Offentl. Med.*, Berlin, 1879), and, as before said, correspond more to the typhoid than the algid stage of cholera, viz., hæmorrhagic contents of stomach, mucus tinged with blood, mucous membrane eroded in patches, with hæmatin staining, frequently ulcerations and sloughs of the same even as early as ten hours after the dose. Moreover, the intestinal alterations after arsenic chiefly affect the duodenum and upper part of the small intestine; but after cholera, the ileum chiefly. The evacuations are never so watery as after cholera. The author believes that bacteriological examinations of the stools in suspicious cases during cholera epidemics, made before and after death, are as important as chemical evidence of the presence of arsenic, which is going rather far.

1401. *Peters on Encapsuled Gregarines in Diphtheritic Membranes.*—In six fatal cases of diphtheria, microscopical investigation of membranes coughed up showed the presence of peculiar structures, which the author is inclined to regard as animal parasites. They consisted of egg-shaped and globular cells, in size from three to seven times the diameter of a red blood-corpuscle, and they took a rose-red coloration as a rule in alum-carmine. In places where they had fallen out of the tissue, similarly shaped spaces were left. Each structure showed a doubly or singly contoured envelope, and dark-coloured contents, either finely-granular protoplasma, or else a mass perfectly filling the cell. Such cells were found in 33 per cent. of the sections. The author regards them as encapsuled gregarines, or psorospermia (coccidia); they closely resembled the gregarines so frequently found in the rabbit, and other animals (dogs, calves, fowls). Citations from veterinary authorities are made proving that such parasites may be transferred to man, especially to children. The author considers it possible that they may be a cause or complication of diphtheria. The original paper is to be found in the *Berliner med. Wochensch.*, No. 21, 1888.

E. J. Edwardes, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

1402. Raynaud, M.—On a Case of Poisoning by Salts of Copper. (*Rev. Gén. de Thérap.*, 1888.)

1403. Montalti.—A fatal case of Poisoning by Hydrochlorate of Cocaine. (*Lo Sperimentale*, September 1888.)

1404. Katayama.—On a New Test for Carbonic Oxide Poisoning (*Ueber eine neue Blutprobe bei der Kohlenoxydvergiftung*). (Virchow's *Archiv*, Band cxiv., Heft i., S. 53.)

1405. Boughton, Dr. L. G.—Poisoning from the Local Use of Cocaine. (*North Carolina Med. Jour.*)

1406. Rigor Mortis.

1407. Godson.—The Duration of Pregnancy. (*St. Bartholomew's Hospital Reports*, vol. xxiv.)

1408. Russell.—Signs of Death from Drowning. (*Indian Med. Gazette*, December 1888.)

Art. 1402. *Raynaud on a Case of Poisoning by Salts of Copper.*—It is the custom in certain parts of France to utilise the spaces left between the rows of vines to plant French beans. It often happens that when the former are watered with an antiseptic solution containing sulphate of copper and lime, in order to prevent disease, the beans also get a share. When they are then sold, without having been washed, accidents happen. In the case in question the quantity of copper present was sufficient to leave a blue scum on the soup made with the incriminated beans. Soon after partaking of this soup a woman and several children were seized with colic, vomiting, diarrhœa, &c. It was shown that the most careful soaking and washing failed to remove more than a small proportion of the poison, unless the water was acidulated with sulphuric acid.

Alfred S. Gubb.

1403. *Montalti on a Fatal Case of Poisoning by Hydrochlorate of Cocaine.*—A slightly built woman took, by mistake, 1½ grammes (that is, about 22 grains) of hydrochlorate of cocaine in solution. In about 15 minutes she became delirious, complained of an obstruction in the throat, and made efforts at vomiting, but did not eject anything. At the same time she was seized with a rigor so that it was necessary to apply hot cloths and warm the bed. Gradually she became more agitated, and commenced to have illusions of vision. Her face was pale, the pupils dilated, the lips cyanotic; she became pulseless and soon lost consciousness. The author made a series of experiments with cocaine on the lower animals and arrived at the following conclusions:—*a.* That the pathological changes produced by hydrochlorate of cocaine are the same in the lower animals as in man. *b.* That the clinical phenomena are capable of being confirmed by *post mortem* evidence. *c.* That in cases of suspected death from cocaine poisoning the results of a pathological investigation are of great value from a medico-legal point of view. The changes he found to be constant in the lower animals are the following:—1. Persistence of *post mortem* rigidity in the lower jaw and in the limbs beyond the usual time. 2. Very marked injection of the vessels of the brain and spinal cord. In two rabbits a hæmorrhagic nucleus was observed on the superior surface of the medulla oblongata. The tissues of the optic thalamus were so full of blood as almost to resemble an extravasation. 3. Congestion and vesicular emphysema of the lungs. The heart in diastole, and with the right ventricle full of coagulated blood. General vascular dilatation. 4. The whole alimentary canal and the mesentery greatly congested. The liver, spleen, and kidneys very full of blood. These changes agree not only with those described by Bennett in 1873 in his experiments with caffein, thein, and guarana, but also with those found in the case that forms the subject of this paper. The essential result of poisoning by any of these substances is vaso-motor paralysis.

H. Handford, M.D.

1404. *Katayama on a New Test for Carbonic Oxide Poisoning.*—(1) This new test is applied by the addition to the blood of orange-coloured ammonium sulphate and dilute acetic acid in the following manner:—(*a*) If the blood has stood for some time it must be shaken slightly, since the blood-corpuscles sink and the upper layers are poor in them. (*b*) Only so much acetic acid must be added as to render the solution slightly acid. (*c*) The test-tube must not be shaken too much, since the carbonic oxide may be driven out by this process. (2) The colour reaction in blood containing carbonic oxide is from a clear cinnabar to rose-red, and in pure blood, grey, green-grey, or reddish green-grey. (3) The delicacy of this test is such that a mixture of carbonic oxide blood and pure blood in proportions of 1 : 5, or, in favourable cases, of 1 : 7, gives a fairly clear reaction. (4) The fluid remaining after the test gives an acid reaction, and when the deposited sulphur has been separated by standing and filtration, the spectrum of the mixed blood shows the bands of carbonic oxide hæmoglobin and sulphur methæmoglobin, whilst the pure shows reduced hæmoglobin, oxyhæmoglobin and sulphur methæmoglobin. (5) The spectrum of the fluid obtained after Salkowski's test agrees in every way with that described above.

Bertram C. A. Windle, M.A., M.D.

1405. *Boughton on Poisoning from the Local Use of Cocaine.*—Dr. L. G. Boughton reports the following case. A young woman suffering from toothache went to a dentist, who placed three drops of a 20 per cent. solution of cocaine in her tooth on some cotton wool; this relieved the pain and she went home. On her arrival she complained of feeling tired and went to bed, and her relatives, thinking she looked ill, sent at once for Dr. Boughton. He came immediately and found her unconscious, with a pulse of 47 and respirations 12; the right pupil (that on the side on which the cocaine had been used) was much dilated; she could not be roused from her state of insensibility. Brandy given both hypodermically and by the mouth failed to rouse her, so he then injected strychnia, using 1-100th of a grain. In a few moments she began to rally, and in two hours was completely free from the effects of the cocaine. The two points of interest in his opinion were the slow pulse and the rapid recovery under the influence of strychnia.

1406. *Rigor Mortis.*—A leading article in the *Indian Med. Gaz.*, December 1888, states that observations are needed in India as to the period which intervenes between death and the supervention of rigor mortis in that country, instancing a recent trial when it was of vital importance to determine the approximate time of death, the two points on which stress was laid in that case being the presence of rigor mortis and the degree to which digestion had advanced, for death took place when the stomach was full. Observations regarding rigor mortis, says the writer of the article in question, require no special training or skill, and no appliances, and they are such as can be easily carried out by many observers working independently, the results being subsequently collated for general inference. The points requiring special attention in such an inquiry would be—1. Locality. 2. Season. 3. Temperature and humidity. 4. Sex of subject. 5. Age. 6. Duration of illness. 7. Cause of death. 8. Date and hour of death. 9. Manner of death. 10. State of muscular system at time of death. 11. Temperature of body at and after death. 12. Rate and duration of cooling process. 13. Hour of earliest appearance of rigor mortis. 14. Groups of muscles successively stiffened. 15. Date and hour of disappearance of rigor mortis. 16. Order of relaxation of different groups of muscles. 17. Time of appearance of first signs of putrefaction. There can be no doubt that a series of observations carried out on this plan would be of immense value.

1407. *Godson on the Duration of Pregnancy.*—Dr. Clement Godson, in a paper in the twenty-fourth volume of the *St. Bartholomew's Hospital Reports*, discusses a recent *cause célèbre* in which the duration of pregnancy was one of the questions in dispute. The mother of the child, whose legitimacy was in question, had eloped on June 30, 1884, and a divorce had been obtained in consequence. She was taken in labour at 4 A.M. on April 2, 1885, *i.e.* 276 days since she had left her home, and it was not denied that she had slept with her husband up to that time. She had commenced to menstruate on the evening of the day before she left her home, that being the proper date for the appearance of the menses; the menstruation was, however, slight, and ceased on the third day, whereas previously it had always lasted a week. There were, therefore, two points raised against the legitimacy of the child; first, the duration of the pregnancy, 278 days, and second, the menstruation after conception. These points are discussed by Dr. Godson at some length, and he shows conclusively that 278 days is by no means an unusually long period for gestation, and that menstruation during the early part of pregnancy is quite common, indeed, it seems to be the rule almost that conception takes place just before a menstrual period is expected. The jury, however, found a verdict against the legitimacy of the child, after a deliberation of only two minutes, their decision doubtless resting on purely moral considerations, certainly not on any legal presumption, which would have been the other way.

1408. *Russell on Signs of Death from Drowning.* Surg.-Major E. G. Russell reports in the December No. of the *Indian Med. Gazette* the appearances found in the bodies of three natives who were drowned in the Hooghly River in August 1888, by the capsizing of a boat. The men were drowned at the same time, and the bodies were recovered together; the examination was made five hours after the bodies were removed from the water. Two of the men were aged about twenty-five, the third about twenty. Death occurred from pure asphyxia in the first, from mixed asphyxia and coma in the second, and from shock and brain effusion in the third. Decomposition was only present in the first, and only externally in the scalp, face, and neck, indicating that putrefaction had begun under water. Rigor mortis was universal in the second case, in the first it had mostly passed off, in the third it had passed away from the regions first invaded. In none of the cases was the tongue swollen or protruded, nor was the cutis anserina present. The penis was semi-erect in one case, flaccid in another, retracted and shrunken in the third; in only one case had there been emission of semen and extrusion of fæces. Water had been inspired into the lungs in two cases. The larynx, trachea, and bronchi showed red congestion and scarlet ecchymoses in one case. Tardieu's spots were present as large dark patches in one case only. The pulmonary arteries and the coronary veins were engorged in the two cases in which asphyxia was concerned in causing death. The stomach contained muddy water in all three cases; the mucous membrane of the stomach and intestines was congested in one case. There was venous congestion of the brain and meninges in all three cases. The pericardium contained blood-stained serum in two cases. Thus, though the conditions under which the men were drowned, and the bodies found and examined, were identical, the changes present showed considerable deviation.

OPHTHALMOLOGY.

RECENT PAPERS.

1409. Prince, Dr. Arthur.—On Exsection of the Rectus. (*Jour. of the Amer. Med. Assoc.*, Oct. 31, 1888.)

1410. Laqueur, Professor.—On Extraction of Foreign Bodies with the Magnet. (*Centralbl. für Augenheilk.*, October 1888.)

1411. Hubbell, Dr. Alvin.—On the Electro-magnet in the Removal of Steel from the Interior of the Eye. (*Buffalo Med. and Surg. Jour.*, July 1888.)

1412. Hutchinson, Mr. Jonathan.—On Certain Cases of Vitreous Opacities. (*Ophthalmic Review*, January 1889.)

1413. Van den Bergh, Dr.—Sympathetic Ophthalmitis following Abscission of a Staphylomatous Cornea. (*Annal. d'Oculist*, September-October 1888.)

1414. Dehenne, A.—On some Modifications in the mode of Performing Iridectomy in certain cases of Glaucoma. (*Ann. d'Oculist*, September-October 1888.)

1415. Marriott.—On Cellulitis of Eyelids and Face after Atropin Drops. (*Illustrated Med. News*, December 1888, p. 294.)

Art. 1409. *Prince on Exsection of the Rectus.*—Cases of extreme strabismus, in which there is irretrievable loss of power of the muscle, have generally been considered to be incurable; division of the contracted, and advancement of the defective muscle being alike useless. In the present paper the writer gives some cases in which he succeeded in removing the deformity by either entirely doing away with, or very much weakening, the action of the contracted muscle. It is evident that if the muscle were completely paralysed the eye would still be immobile, but the deformity would be much less conspicuous if the eye could be kept in the straight position. The exophthalmos, which might be expected to result, was not noticeable in any of the cases reported. The conditions for which Dr. Prince considers the operation advisable are—(1) Permanent atrophy or paralysis of a muscle; (2) irrecoverable loss of power in either rectus through section on the proximal side of the capsular perforation; (3) extreme over-correction of a squint, when the tendon has retracted beyond the equator, and cannot be advanced owing to adhesions; (4) irrecoverable 'traumatic dislocation' of the rectus, by which the writer would appear to mean detachment or laceration. The case first quoted is to illustrate the inefficiency of advancement and simple tenotomy of the opponent. Parallelism may be produced for a time, but the constant traction of the healthy muscle will before long draw the eye in its direction, and the deformity will be reproduced. The following is a good illustration of one type of case in which the suggested operation is likely to be useful. A man, aged 43, was operated on for squint at the age of 20 by an itinerant quack, with the result that the right eye diverged 50° and the left 40°, the lateral motion being only 15°. A lateral (horizontal?) incision was made over each external rectus, and a hook introduced far back beneath the muscle, which was then divided external to the capsule. An internal advancement suture was then placed in each eye. On the fourth day there was an inward deviation of 5°, which was not noticeable. No deviation has occurred in seven years. No exophthalmos occurred, and there was lateral movement of right eye through 40°, and of the left through 45°. The following case differs somewhat. In it the left external rectus was completely paralysed, as the result of an accident twelve years previously. The deviation was 50°, and the eye was motionless. The eye having been rotated outwards as far as possible, parallel lateral (*i.e.* we presume, horizontal) incisions were made, and the muscle was drawn out by the hook and divided as far back as possible. The anterior portion was then dissected away. The final step consisted in the introduction of an external advancement suture. No exophthalmos resulted, the eye parallel to its fellow, but immobile; and lateral movement of the head caused diplopia. Final result not stated. Three cases are recorded with external strabismus, with very limited movement, from over-correction. In all, good position was obtained with a certain amount of movement. The last case was one of injury to the inferior rectus, and an operation similar to those described was performed on the superior rectus. The attachment of the superior rectus was put back as far as the equator. No doubt in some cases great benefit will be obtained from an operation such as that suggested, but evidently a good deal of judgment will have to be exercised in the selection of the cases. To resect the muscle unless it could be shown that recovery of its paralysed antagonist was utterly hopeless would be a grave error. If this is the case, and the eye is amblyopic, we can see no objection to the operation, but when there is no amblyopia a very embarrassing diplopia might result. The inconvenience of diplopia from a paralytic squint ceases to be very annoying after a time, because the images are far apart, and the false image is on a peripheral part of the retina. But if diplopia occurs directly an attempt is made to direct the eyes laterally, and only then, we should imagine that it might prove very embarrassing, and the patient might find his condition less endurable than it was before. All who have had much to do with the treatment of cases of divergent squint know how difficult it is to know whether or not the diplopia will prove troublesome after the nearest approach to correction that can be obtained by operation. We should think, therefore, that it would be well, at any rate for the present, to confine the operation to cases in which there is only monocular vision.

1410. *Laqueur on Extraction of Foreign Bodies with the Magnet.*—Although the electro-magnet has now been very frequently used in the extraction of particles of iron or steel from the vitreous with success as far as the immediate object of the operation is concerned, we believe that in a very large proportion of the cases the eyes have subsequently been lost from opacities in and shrinking of the vitreous, or from detachment of the retina. The case, therefore, published in this paper is of special interest, since vision was restored to its normal acuity, and as it has been under observation nearly three years the result may be considered to be permanent. The patient was a man aged 18; he was injured in the left eye by a splinter of iron, and came under observation four days later. There was a small wound in the cornea close to its inner margin, and a gap in the iris corresponding to it through which a fundus-reflex could be obtained. With dilated pupil several dark flocculi could be seen in the vitreous, and among them a glistening body. The eye was myopic to 3 D., the other being emmetropic, V. ⅓. There was considerable injection of the conjunctiva. The following day under chloroform, an incision was made 7 millimètres in length between the tendons of the internal and superior recti, with a lance-knife. On the withdrawal of the knife a small drop of vitreous protruded. The finest point of Hirschberg's electro-magnet was introduced, and on carrying it downwards and inwards the characteristic click was heard. On withdrawing the magnet, however, the foreign body remained behind, but on re-introducing the magnet it was withdrawn, and it proved to be a splinter measuring 6 millimètres in length and of a breadth of from 1–1·5 millimètre. Only a trace of vitreous was lost. A 4 per cent. solution of boric acid was used as an antiseptic. A fortnight after the operation the eye was quiet, V. ¼, the iris gap filled by lymph. On the nineteenth day the corrected vision (the eye had become astigmatic) was 2–5ths. Two months after the operation, vision was normal, and was still so two years and three-quarters after the operation, shortly before publication. The author gives three other cases which are also of interest. Case 2 was a man aged 27, who was seen four hours after the accident. The wound was close to the corneal margin, the whole cornea slightly turbid, V. fingers at a few mètres. With the ophthalmoscope dense vitreous opacity could be seen downwards and inwards, but no definite foreign body. The following day, under cocaine, a 7 millimètre incision was made between the internal and inferior rectus. The magnet was introduced and an irregular fragment of about 2 millimètres diameter removed. Vision was very defective at first in consequence of opacities in the vitreous, but five months after the operation it had improved to ⅔. In this case owing to an accidental noise the click of the foreign body meeting the magnet was not heard, and in consequence the vitreous was stirred up rather freely. Case 3 was a man aged 21, who was seen an hour after the accident. There was a 5-millimètre wound in the ciliary region, V. M. By daylight a yellowish glistening round body could be seen behind the lens. The foreign body was successfully extracted, but the eye was subsequently lost from opacities in the vitreous and extensive detachment of the retina. Case 4, man, aged 21, wound 4 millimètres long in corneal margin. Eighteen hours later there was prolapse of iris and some blood in anterior chamber. The foreign body could be seen having a golden-yellow glistening appearance. It was successfully removed with the magnet, and vision improved to 1-6th, but this deteriorated later, owing to the formation of a cataract. The author attributes importance from a diagnostic point of view to the examination by daylight, the glistening appearance being very characteristic, although the portions of metal were black when removed from the eye. Nothing else but a metallic substance will produce this appearance.

1411. *Hubbell on the Electro-magnet in the Removal of Steel from the Interior of the Eye.*—The author records two cases in which a portion of steel was successfully removed from the vitreous. The first was that of a man, aged 43. The foreign body had entered through the sclero-corneal junction, the lens escaping injury. The operation was performed thirteen days after the accident, when the foreign body could not be seen owing to turbidity of the vitreous. Little difficulty was experienced in removing the steel; but, as its position was uncertain, the point of the magnet had to be moved through the vitreous to a considerable extent before the click indicating contact with the magnet was heard. Improvement in vision commenced at once, and, after several months, the patient could read the finest print slowly. The V.F. was somewhat contracted, and there were some choroidal changes. The result was especially important, as the other eye had previously been totally destroyed by a similar accident, and had been enucleated. The second case was that of a girl in whose eye a portion of a needle had penetrated. A few days later the portion of the needle could be seen with the ophthalmoscope, impacted apparently in the ciliary body, its point projecting towards the centre of the globe. The magnet seized the needle at once, but the wound had to be prolonged to the point where it was impacted in order to free it. The eye recovered with normal vision.

1412. *Hutchinson on Certain Cases of Vitreous Opacities.*—Any collection of clinical facts by so careful an observer as Mr. Hutchinson will be read with interest, but we could wish that the information conveyed in this paper had been more complete. There are few cases in the whole of ophthalmic practice more difficult to explain than those in which fine vitreous opacities occur in apparently healthy subjects. Mr. Hutchinson must have seen very many of these, and yet gives us only one which he had met with quite recently. We are surprised to find that Mr. Hutchinson connects opacities in the vitreous with affections of the retina rather than with those of the choroid, stating that in the latter, however extensive and long standing the disease, the vitreous usually remains clear. In a question of this kind Mr. Hutchinson's opinion is of great weight, but we should say that the general opinion is the reverse of this. Certainly in cyclitis the vitreous commonly suffers; and in the choroiditis that accompanies progressive myopia opacities in it are the rule. It is also stated that the vitreous usually escapes in most forms of iritis. The ophthalmoscope is seldom used during the inflammatory stage, but we are certain that we have frequently found opacities in the vitreous after iritis has subsided. In speaking of the possible connection between loss of tone, such as that caused by sexual excesses, and vitreous opacities, the subjective sensation of muscæ and the occurrence of opacities appear to be considered as identical, though that is probably not the writer's meaning. The usual explanation of muscæ when the general condition is lowered, that the pre-existing cells cause subjective sensations owing to loss of tone in the retina, seems to us more in accordance with clinical experience. In the case quoted, in which vitreous opacities occurred in a lad of 16, the general health appeared to be perfect; there were no signs of inherited or of acquired syphilis; the patient's father and some of his father's relatives had suffered definitely from gout. There is an interesting section in the paper referring to the possibility of arsenic, taken for long periods, causing vitreous opacities. We trust that Mr. Hutchinson will follow this paper by a series dealing with other cases of unexplained vitreous opacities.

1413. *Van den Bergh on Sympathetic Ophthalmitis following Abscission of a Staphylomatous Cornea.*—That this operation is liable occasionally to be followed by sympathetic trouble has long been known, but the extreme rarity of the accident has sometimes caused the risk to be disregarded, and the operation is still, we believe, occasionally performed. It is to be hoped that the publication of this case, for which we have every reason to be grateful to the author, will lead to the entire abandonment of the proceeding, especially as the object aimed at—namely, obtaining a good stump for an artificial eye, can be more safely obtained by Mules's operation. The patient, a child of 5, was first seen in October 1887; there was total staphyloma of the right cornea and iris, but none of the sclera. No tenderness, tension normal. There was slight conjunctival injection, which was thought to be due to the eyelashes brushing against the cornea. The staphyloma appeared to have followed an ulcer three months previously. On Nov. 12 the staphyloma was excised in the usual way, the lens was absent, and there was but little loss of vitreous. The sutures were passed through the conjunctiva only. No suppuration occurred. On the second day there was slight photophobia of the other eye, but this soon passed off. On the sixth day the sutures came away, and the wound healed. As the stump was injected, soft, and tender, enucleation was advised, but refused. Dec. 27, slight photophobia in the left eye, vision appeared to be normal. Enucleation still refused. Atropine ordered. The patient was not seen again till Jan. 11, when there was a well-marked sympathetic inflammation, with plastic iritis, tenderness, and scarcely any vision. Some months later the eye was soft, tender, shrunken, and quite blind.' The writer adds, 'tels sont les faits dans leur brutale eloquence.'

1414. *Dehenne on some Modifications in the Mode of Performing Iridectomy in certain Cases of Glaucoma.*—The writer believes that, in all inflammatory forms of glaucoma, iridectomy is the only method of treatment that can be relied upon; but that its efficacy is liable to be impaired by the prolapse of iris into the angles of the wound, and its incarceration there, and by the non-restoration of the anterior chamber. Extreme shallowness or obliteration of the anterior chamber also renders the performance of the iridectomy very difficult, and he accordingly proposes a preliminary operative proceeding with the view of restoring the chamber. In most cases of glaucoma he advocates the production of general anæsthesia, cocaine being as a rule ineffectual when there is increased tension. When for any reason an anæsthetic cannot be given, the writer makes a scleral incision below, a millimètre and a half from the corneal margin, measuring four to five millimètres, using a very narrow Graefe's knife, and making the incision very slowly, so as to obviate the tendency to prolapse of the iris, and dislocation of the lens. He discards the triangular keratome altogether, considering that is an objectionable instrument in all circumstances. When the execution of an iridectomy is rendered difficult owing to shallowness of the anterior chamber the operation is much facilitated by a sclerotomy, or a scleral puncture, the day before. When the glaucoma and the bulging forwards of the iris are secondary to total posterior synechia, a 'retro-iritic sclerotomy' is recommended the day before the iridectomy, by which means the anterior chamber becomes reformed, and the execution of the iridectomy is much facilitated. W. Adams Frost.

1415. *Marriott on Cellulitis of Eyelids and Face after Atropin Drops.*—In the *Illustrated Med. News*, December 1888, p. 294, Mr. Marriott records a case which was under the care of Dr. Angel Money, where the use of atropin caused extensive cellulitis of the eyelids and face. The patient was a man, aged 52, and was admitted into hospital on account of double aortic disease. There was constant slow conjugate nystagmus, with small pupils, and as an ophthalmoscopic examination was required, a drop of atropin solution (gr. iv. to ʒ j.) was instilled into each eye. The patient complained all night of slight smarting, and next morning the eyelids were red, slightly swollen, and tender. The following day the swelling had increased so much that the lids could with difficulty be separated, but there was no discharge and no gumming together of the lids. The swelling gradually disappeared from the lids but spread over the face to the angle of the jaws, and did not disappear for quite a week, when slight desquamation followed. The treatment consisted simply in applying iced compresses with boracic acid lotion. The atropin solution was that in ordinary use in the eye department, and had never given any bad result before. The patient stated that he had suffered in a similar manner from atropin some years previously. [A number of similar cases are noted in the *Medical Digest*, and Appendix, sections 1820-6; and in addition several others have been recently published, especially by Dr. Collins, who advises hyoscine as a remedial agent, *Lancet*, vol. ii., 1886, p. 1154.—*Rep.*] Richard Neale, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1416. Legrain, Dr.—A Contribution to the Study of Communicated Lunacy. (*Archives de Neurologie*, November 1888.)

1417. Smart, Dr. Andrew.—A Case of Multiple Neuritis in a Woman, of Combined Syphilitic and Alcoholic Origin; Treatment by Electro-Massage; Complete Recovery. (*Edinburgh Med. Jour.*, July 1888.)

1418. Burckhardt.—The Sphygmograph in the Treatment of Insanity. (*Annales Médico-Psychologiques*, September 1888.)

1419. Wiglesworth, Dr. J.—The Pathology of Delusional Insanity. (*Journal of Mental Science*, October 1888.)

1420. Richardson.—On Nausea from Movement of the Body in Rotation. (*Asclepiad*, November 1888, p. 334.)

1421. Impaccianti.—On Relapsing Multiple Peripheral Neuritis. (*Lo Sperimentale*, September 1888.)

1422. Bareggi.—On the Intercurrent Maladies arising among those Bitten by Dogs, either Mad or Supposed to be so, and Treated by the Pasteur Method. (*Gazz. degli Ospitali*, October 1888.)

Art. 1416. *Legrain on Communicated Madness.*—The author brings forward eight cases bearing on this subject. We have already the *folie imposée* of Lasègue and Falret (*Archives Gén. de Méd.*, 1877), the *folie simultanée* (*La Folie à Deux*, *Thèse* 1880), the *folie transformée* of Kiernan, and the *folie induite* (*Archiv für Psychiatrie*, t. xiv.) of Lehmann. The simple term *la folie communiquée* seems the best. This kind of lunacy may be divided into two categories. In one, both patients are actively lunatic and mutually impose their ideas on each other; in the other, to which belong epidemics of madness and of convulsions, one individual takes the lead and imposes his ideas on the rest. This latter division comprehends the general madness which appears to invade temporarily whole classes of the community under the pressure of some powerful general cause, political, religious, or other. Communicated lunacy has its basis in the tendency to imitation which is innate in the human breast. All minds may be ranked under one or other of these three classes—active, passive, and indifferent. Persons with 'active' minds are adventurous; their faculties are in a perpetual ebullition, they always press forwards, rush to encounter the unknown, and engage themselves without reflection in any cause, good or bad; they constitute the fanatics, the impassioned, the enthusiasts of all sorts. 'Passive' minds are very easily influenced by the above, and are their natural prey; they are the timid ones, the feeble of mankind. Between the two kinds are the 'indifferent'; such persons weigh matters well before they engage in them, and then do so in good earnest. Amongst the various individuals of mankind there is no idea so eccentric but that, when scattered on the four winds of publicity, it will find some suitable ground in which to germinate; hence the imitation of crimes, and the self-accusations for crimes not committed, but which have caused a general 'sensation,' and similar phenomena. So true is this that different epochs of history are represented by the prevailing forms of madness, which reflect the ideas of the time. The influence of suggestion is inconceivably strong sometimes. The author relates that three peasants, returning half-drunk from a fair, stopped to drink at a wine-shop. One of them proposed that they should all three hang themselves at nine o'clock that evening, 'to play a trick on their wives.' The idea was accepted, and then apparently forgotten. But at nine o'clock each man hung himself in his own stable; two died; the third was saved by his wife, and related the above to his doctor. It may be remarked that Englishmen have not yet arrived at such a pitch of sociability as to hang themselves to oblige each other. When the madness is of a chronic character it is especially difficult to trace. Its initiator may be an intelligent man, appearing to the eyes of every one but the physician in full possession of all his faculties. His delusion is a type of systematisation, well deduced and logical throughout, and so true apparently that a long interrogation may be required for its exposure. Such a disease spreads like a contagion, and the man makes several disciples before he is locked up, if he ever is locked up. And numerous are the protestations on the part of his family and others, if he is then separated from them. The delusion of being persecuted is the commonest; the madness of ambitious delusion is more rarely communicated. The delusion of being 'possessed' is by no means rarely propagated amongst feeble minds. This delusion is fostered at the present time by the prevailing tendency to examine into 'hypnotism, spiritualism,' &c., and we must all agree with Gilles de la Tourette (*L'hypnotisme et les états analogues au point de vue médico-légal*, Paris, 1887) that the practice of hypnotism should never be conducted as a public exhibition, but should be confined to a strictly scientific domain. A few cases are brought forward by the author. They are as follows, in few words: I. A mother, who had recently thought much about 'spirits,' and believed in their reality, at last thought she was 'possessed,' and her son, aged 12, participated in this idea. Both made grimaces and peculiar laryngeal sounds, and both were cured by separation in an asylum for a few weeks. II. A mother, aged 52, had the chronic delusion that she was deprived of her personality by persecution, and was highly systematic in her views on the subject. Her daughter, aged 27, showed great mental and moral weakness on her own account, and also reflected the mother's delusion by the idea of persecution. Not finding work to do, she concluded she was prevented by others. Both were at last 'interned.' III. Two sisters, aged 44 and 27 years. The elder has gradually put together a well-connected system of persecution; the younger, though apparently the more active of the two, is only an echo of her sister. Both father and mother had hanged themselves many years before. The two sisters were admitted to the St. Anne Asylum on the same day. IV. A woman, aged 39, saw both her parents commit suicide together with perfect equanimity (the mother was melancholic for years), and related the whole circumstance with perfect *naïveté*, as if she did not comprehend her own loss in the least. She was mentally deficient, and was received into the asylum. The passive individuals who are so readily influenced by more active minds are influenced by the physician with equal readiness. But no time should be lost, or the patient may originate a delusion of his own, instead of merely participating in the delusion of another. Treatment will, in fact, be more effectual in proportion to the mental feebleness of the patient, for much systematisation of a delusion indicates a higher grade of mind. It is otherwise with the more active minds; the madness here will have exactly the same course and direction as the created delusion. The patient should be at once separated, and thus prevented from dragging others in his course. As to the medico-legal question, the author is of opinion that our individuality is the synergic resultant of all our intellectual forces. The destruction of this synergy cannot be anything but pathological, and this eliminates all idea of responsibility. Half the mind cannot be unaware of what is going on in the other half. The theory of responsibility recalls the time when it was thought the mind consisted of a number of distinct faculties, capable of working and of injury separately; this theory gave rise in psychiatry to the doctrine of monomanias. Finally, from a medico-legal point of view, it is illogical to raise the question of responsibility at all, either as regards the active or the passive madman. [The reporter is of opinion that punishment for crime is of no efficacy in deterring others from crime, and is usually a very great evil to the criminal himself. The day will come when prisons and punishments in general will be abolished, and asylums substituted in their place where necessary.]

1417. *Smart on a Case of Multiple Neuritis.*—The following is an abstract from a reprint of an article in the *Edinburgh Med. Jour.* for July 1888. The patient, a widow aged 37, was admitted into the Edinburgh Royal Infirmary, November 1887. She had been married about eleven years, had had five children and two miscarriages, and was always subject to menorrhagia. Four of the five children died in infancy, the fifth (aged 10 years) was delicate. The husband had died a few months before her admission, at a time when she was confined to bed by the menorrhagia. On trying to get about she felt unable to walk or stand, except to a slight extent occasionally. Two months before admission, had feelings of cold and numbness, with tingling and pricking sensations in the feet and legs, and, later on, darting pains. Present condition:—Cannot walk or stand. Decubitus, with knees drawn up, feet rigidly extended, and toes curved under soles. Extends the legs by a painful effort, but cannot flex feet or extend toes. Great tenderness over region of anterior tibial nerve. Passive movements give pain. Examination caused much perturbation, hence sensory impressions could not be defined. No particular atrophy, no œdema. Plantar sensibility deficient, but she said she felt the ground when placed on her feet. Knee- and ankle-jerks abolished. Sphincters not impaired. Slight reaction of degeneration. Memory defective. Extreme emotional depression, but intellect unimpaired. Sleep good. Tingling in hands; is always rubbing them; commencing wrist-drop; pupils act to light and accommodation; no headache. Syphilis was not suspected at the time; the patient's memory was defective, and information meagre. *Treatment.*—All stimulants stopped, even tea and coffee, and valerianate of iron given, with strychnine and arsenic. Massage was employed assiduously, later on combined with electrolysis by means of a special metallic roller, which could be applied with any desired degree of pressure, and freely moved over the paralysed limbs. Patient strongly objected to this treatment at first, but readily submitted after experiencing benefit. Improvement was steady from the first, and gradually she began to walk with a shuffling gait, assisted by the nurse. There was never ataxia, which thus distinguishes multiple neuritis in the female from the alcoholic ataxia occasionally met with in the male. Spinal paraplegias are also thus excluded. Patient could walk without help in three months, and soon afterwards went to a convalescent hospital and thence to her home, the improvement persisting. Regarding the differential diagnosis, the following statements are made by the author:—1. In hysterical conditions, the knee-jerk is always present. 2. In cerebral paralyses, the tendon reflexes are exaggerated; there is also a tendency to rigidity, and the electrical conditions are unchanged. 3. In tabes dorsalis, pupillary symptoms are characteristic; also the usual inco-ordination; and the electrical conditions are unchanged qualitatively. 4. Acute ascending paralysis was excluded by the absence of any marked sensory phenomena, and the electrical conditions are unaltered in this disease. 5. Myelitic paralysis was easily excluded by the absence of bedsores and of sphincter impairment. 6. Spinal meningitis was excluded by the absence of the severe back pain, of the retraction of the head, and of the muscular twitching. 7. In poliomyelitis, the muscles of the trunk, not of the forearms, are affected next after the legs, whereas in multiple neuritis the extensor muscles of the forearm are next affected. When the paralysis in poliomyelitis does pass to the upper limb, the intrinsic muscles of the head are first affected. Moreover in this disease there is no sensory disturbance. Finally, the author lays stress on the importance of an early diagnosis, of perseverance in active treatment, and of the deprivation of alcohol, whenever this has caused the disease. The above case is regarded, from subsequent authentic information, as due to syphilis primarily, aggravated by alcohol. An historical sketch of multiple neuritis precedes the case itself, suggesting the idea that multiple degenerative peripheral neuritis may be the underlying pathological condition common to a large group of variously modified disorders.

E. J. Edwardes, M.D.

1418. *Burckhardt on the Sphygmograph in the Treatment of Insanity.*—At the annual meeting of the Swiss alienist physicians, held at Basle, June 17 and 18, 1888, Dr. Burckhardt read a paper on the application of the sphygmograph to the study of mental disease. The author has made extensive use of the sphygmograph in the examination of a number of insane patients, and has in some cases been able to make a diagnosis, and found therapeutic indications as the results obtained from this instrument. M. Burckhardt showed numerous sphygmographic tracings in support of his conclusions, and gave the history of several interesting clinical cases. In a patient attacked with circular insanity returning monthly, he succeeded in suppressing the attack by subcutaneous injections of strychnia which were put in operation each time that the sphygmograph showed a change in the arterial pressure, a warning sign announcing the approach of an attack. In a second case of circular insanity of bimensual form, Dr. Burckhardt made for a year regular injections of strychnia after the same indications. He has already obtained a great improvement and hopes to arrive at the suppression of the maniacal attacks.

1419. *Wiglesworth on the Pathology of Monomania.*—In the *Journal of Mental Science* for October 1888 there is a paper on the 'Pathology of Delusional Insanity' (monomania), by Dr. Joseph Wiglesworth, which is well worthy of attention. The author considers mania and monomania to be fundamentally distinct. Mania begins from the top, monomania from the bottom. Mania, by implicating the highest co-ordinating plexuses of the brain, allows an over-activity to the lower centres. It appears to me that the tumult of thought, sensory impressions, and motor activity which constitutes mania, cannot be explained by the mere want of inhibition of the higher centres. On the other hand, Dr. Wiglesworth's generalisations on monomania plainly come from an acute observer who has matured his views by close study of his cases. Monomania or delusional insanity, he observes, commences with hallucinations and illusions of the special senses. The hallucination precedes the delusion. The intellectual faculties are the last to be affected, and sometimes seem not to be affected at all. The memory very frequently remains unimpaired; but we should imagine that if the judgment were not affected the patient would not allow himself to be deceived by hallucinations and false impressions of the senses. Dr. Wiglesworth observes that abnormalities of the sense of touch sometimes do not give rise to delusions being corrected by the sense of sight till the patient becomes blind from atrophy of the optic nerve. After this he is no longer able to correct the false, tactile impressions, and delusions appear. He refers to instances of the delusion of persecution in tabetics in which sensory perversions seem to appear as the cause of the insanity which follows. We have no doubt that many forms of insanity are preceded by disease of the sensory nerves or basal ganglia. This forms a subject for future research and observation which Dr. Wiglesworth is well fitted to pursue.

W. W. Ireland, M.D.

1420. *Richardson on Nausea from Movement of the Body in Rotation.*—In the *Asclepiad*, November 1888, p. 334, Dr. Richardson records the case of a young man who met with a railway accident. While engaged sorting letters in the mail van, the train came into violent collision and was thrown off the line. The carriage was not overturned, but the floor of it was broken to pieces, and in order to save himself he seized and hung by a cord that was attached to the roof of the carriage. At once he began to swing rapidly round and round until the carriage stopped, some five or seven minutes after the collision. At first he felt a sensation of excitement, but soon experienced 'an awful sensation in the stomach, as if he must vomit, but couldn't,' and this was succeeded by a feeling of faintness, so that he retained his hold upon the cord with extreme difficulty; soon he became unconscious, and on recovering found himself in bed, but 'heart sick,' and tried to vomit with little effect. He was still, according to his own sensations, turning round, and this continued for many weeks. Two months after the accident the efforts to vomit were still present, he could take very little food, was much emaciated, and could not sleep. Dr. Richardson was then consulted, and advised the application of cold spinal douches, firm bandaging of the stomach, and farinaceous food of the lightest description. To obtain sleep he recommended resting in a rocking-chair, and that he should be rocked gently until he fell asleep. In a few weeks there was a rapid improvement under this treatment, but a very slight diversion from a rigid method of living brought on the stomachic derangement, with giddiness and depression of mind. This case is well worthy of study as bearing a close resemblance to sea-sickness.

RICHARD NEALE, M.D.

1421. *Impaccianti on Relapsing Multiple Peripheral Neuritis.*—The patient was a boy, aged 18, in the orphanage at Florence. He was remarkably well developed, and had enjoyed good health till a few months before September 1885, when he was first seen. He then complained that his legs suddenly gave way beneath him while running, or going up stairs, and that he fell to the ground. His legs felt heavy, and it required more than the usual effort to raise them, so that in careless walking he constantly used to catch his feet against the ground. He also felt some weakness of the arms and of the body generally. His grasp was weak on both sides, and he had marked wasting of the thenar and hypothenar eminences. The knee-jerks were absent. There was no tenderness along the course of the principal nerve-trunks. The pupils were normal and reacted to light. He could stand with the eyes closed, and had no functional disturbance of bladder or rectum. He was supposed to be suffering from a degeneration of the grey substance of the anterior horns of the cord, and was treated with nitrate of silver internally. He was not seen again till December of the same year, when he was much weaker, and the muscular wasting was so marked that Professor Ezio Sciamanna, who was called to see the lad, considered that there could be no doubt of the existence of a lesion of the anterior horns. He complained much of weariness and loss of energy. He was at this time treated by the constant current, with small doses of strychnine internally, and had the actual cautery freely applied along the spine on two occasions. After this he became rapidly worse. The muscular atrophy made rapid progress, the weakness increased remarkably, and there were superadded intercostal neuralgia, uncertainty of gait, and a feeling as of wool under the feet. There was no fibrillary twitching, nor were the main nervous trunks tender on pressure. Common sensation was found, after long and careful examination, to be slightly diminished, on the anterior surface of the forearm, the palms, the anterior and inner surfaces of the thighs, and on portions of the back. The knee-jerks and the plantar reflexes were gone, but the cremasteric remained. Muscular power was much diminished in the upper limbs, especially the left, as tested by the dynamometer. There was also loss of power in the legs. There were no eye symptoms, and he could stand steadily with the eyes closed. The muscular sense was unimpaired. The patient complained of stabbing pains here and there, and of very profuse sweating. There was a certain degree of ataxia in the movements of the arms, and in the gait. The functions of the bladder and rectum were not interfered with. On electrical examination the reaction of degeneration was most marked. It was now evident that the disease was multiple neuritis and probably of rheumatic origin. He was treated with iodide of potassium, vapour baths, and complete rest; and in three months he was walking about again, although the profuse sweating continued, and he was still feeble, and complained of a feeling of heaviness in the legs. In the November following, after a fresh exposure to cold and wet, he had a relapse of all the former symptoms, and became much worse than ever. The muscular wasting was extreme; the fingers were flexed from wasting of the extensors, the feet were in a condition of talipes equino-varus, the intercostal muscles were greatly affected, and the breathing was laboured. In fact, the case looked hopeless, and he seemed certain to die, and that very shortly. Many remedies had been tried, but the treatment chiefly persevered in consisted of vapour baths, injections of carbolic acid, mercurial inunction, with iodide of potassium internally. In four or five months the patient had again recovered to a remarkable degree, though some of the muscular wasting had progressed beyond repair. The author points out that in chronic cases of multiple neuritis, unaccompanied by fever, with little or no disturbance of sensibility, and with the muscular wasting commencing in the thenar and hypothenar eminences, the resemblance to anterior poliomyelitis is very close, and the diagnosis often, at first, impossible. The resemblance to tabes was, at one time, also marked, and it might have been fairly considered an example of pseudo-tabes. [The origin of the neuritis does not seem to have been at all satisfactorily cleared up, and it appears to have been called *rheumatic* without sufficient justification, as there was never any other manifestation of rheumatism. The only grounds for this diagnosis seem to have been the absence of any other evident cause, and the apparent influence of exposure to cold and wet.—*Rep.*]

1422. *Bareggi on the Intercurrent Maladies arising among those Bitten by Dogs, either Mad or Supposed to be so, and Treated by the Pasteur Method.*—The author is the director of the Antirabic Institute at Milan, and during the past two years six hundred patients have passed through his hands. Two fatal cases of erysipelas arose, both times from the wound. In each case the patients were old (79 and 57), very dirty, and fatigued by a long journey. The bites were on the hands, and erysipelas was commencing when they first came to the institute. As a rule, bites that have not been cauterised heal quickly and normally. After cauterisation they heal much more slowly. They were usually thoroughly cleansed in a solution of corrosive sublimate, 2 per 1,000, and covered with a pledget of wool dipped in the same. When the sloughs had separated, the wounds healed readily. During the second period of six months there were numerous cases of abscess in the abdominal wall arising at the site of injection of the fluid. This was shown to be due to some impurity of the cultivated fluid, as many of the rabbits were dying of septicæmia at this time. For the past year there have been no abscesses, as the cultivations have been maintained pure. [Last August I saw about sixty patients injected at the Pasteur Institute in Paris, and there were one or two with abscesses in the abdominal wall.—*Rep.*]

During the second year greater care has been taken to insure the cleanliness of the patients, and since then there has been no more erysipelas. Of the medical diseases arising among the patients the majority were infective, such as measles and small-pox. Gastro-enteric attacks were very common, especially during the early part of the treatment, and were evidently due to the fatigues of the journey, to errors of diet, change of air and food, separation from home, fear, and anxiety. They readily yielded to simple treatment as a rule, though one child of four died of gastro-enteritis with left pleurisy. Nervous affections were common, and consisted usually of general hyperæsthesia, and neuralgia arising in the nerves terminating in the parts bitten or cauterised. The treatment seemed to have a decidedly calming effect. In some cases there was insomnia and delirium, which in one man led to suicide. A very well-marked case of hysterical hydrophobia in a man, aged 21, with difficulty of swallowing, giddiness, horror of water and of shining objects and of a bright light, was cured at once on the patient being assured that the inoculation experiments made with the dog's spinal cord showed that it had not suffered from rabies. The Pasteur treatment does not of itself produce any general disturbance, and it has been shown to be well borne in even larger doses than those usually given at other institutes. As much as eight injections a day of two grammes of Pasteur's emulsion were given without ill effect, though five of them were at one sitting. H. Handford, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1423. Von Genser.—On Rötheln and Measles in Immediate Sequence. (*Jahrbuch für Kinderheilk.*, Band xxviii., Heft 4.)

1424. Van Cott, Junior.—On Infantile Umbilical Hæmorrhage. (*Brooklyn Med. Jour.*, vol. i., No. 3.)

1425. Ehring, J.—Bismuth Salicylate: its Use in Diseases of Children. (*Arch. für Kinderheilkunde*, ix., 2; *Deutsche med. Zeitung*, 86, 1888.)

1426. Toeplitz.—On Intussusception in Children. (*Breslauer Aerztl. Zeit.*, 22 and 23, 1887; and *Deutsche med. Zeit.*, Oct. 25, 1888.)

1427. Evans.—A Case of Scurvy in a Child aged Five Years. (*Illustrated Med. News*, January 1889, p. 5.)

1428. Olivier, Dr.—On the Contagiousness of Infantile Vulvo-vaginitis. (*Ann. de Gyn.*, December 1888.)

1429. Le Pileur, Dr.—On Infantile Mortality from Syphilis at St. Lazare. (*Bulletin Médical*, Jan. 2, 1889.)

1430. Desblancs.—Purgative for Infants.

1431. Gaucher.—Application in Diphtheria.

Art. 1423. *Von Genser on Rötheln and Measles in Immediate Sequence.*—The notes of the following cases are published because they are supposed to throw some light upon the specificity of rötheln. The first patient was Elsa H., a child 8 years old. When seen on April 29, 1887, her face showed a number of elevated spots, the size of a lentil, red in the centre, but paler at the periphery. They disappeared on pressure, and the skin between them was normal. The conjunctivæ were somewhat reddened, and there was slight nasal catarrh, but there was no cough or sibilus, and no difficulty in swallowing. The hard palate and pharynx showed red bands, but the tonsils were normal. Temperature, 100°. Towards the end of the same day spots appeared upon the trunk and extremities. April 30.—The eruption was still visible, but paler. Temperature, 98°·9. May 1.—Eruption had disappeared. No desquamation followed. There was no constitutional disturbance throughout. The diagnosis first made was slight measles; but, on the second day, this was changed to rötheln. On May 6 she complained of headache and photophobia. The conjunctivæ were very red, and there was considerable running at the eyes and nose, with cough and bronchial catarrh. On the 9th the rash appeared, and first in the face. It was in the form of elevated, dark red, largish spots. There was, in fact, no doubt about the diagnosis—measles. On the 10th the rash had extended over the body, and it followed afterwards the normal course. The patient's two sisters, Fritzi, aged 7 years, and Grete, aged 5½ years, had not been separated. On the 16th Grete showed symptoms of malaise, and on the 17th some small red spots appeared on the face. There was slight redness of the conjunctivæ, but no running at the nose and no cough. The throat, however, was slightly reddened. In the course of the day the rash spread over the entire body, and the child recovered her spirits. The next day the rash had disappeared. No desquamation. Exactly the same appearances showed themselves one day later, May 17, upon the other child, Fritzi, and with her the rash disappeared on the 19th. On May 20 Fritzi began to get feverish, and on the 21st cough and cold set in, with, in the course of the day, the rash upon the face. On the 22nd the spots had attacked the trunk and extremities, and there was photophobia and all the other symptoms of measles. On May 21 Grete became unwell, and on the 22nd the spots appeared on the face, and the other symptoms of genuine measles followed. [The value of the evidence of the above cases upon the specificity of rubeola depends upon the correctness of the diagnosis, but this is precisely what is open to question. It is exceedingly common for children in the incubation or prodromal stage of measles to have an eruption not unlike that described, and this might have happened here. The otherwise very short prodromal period in the two last cases favours this view. There does not appear to have been any epidemic of rubeola at the time.—*Rep.*]

1424. *Van Cott on Infantile Umbilical Hæmorrhage.*—The author begins by referring to an analysis of 178 cases by Dr. Thayer, published in the *New York Med. Jour.* for Oct. 17, 1885. Nearly all of these were complicated with jaundice. Dr. Van Cott had added to these twenty more from various sources in which jaundice was uniformly present. He has therefore come to regard it as standing in some causal relation to the hæmorrhage rather than as a mere complication of it. He remarks that retention of bile causes dissolution of blood-corpuscles, a condition which would increase a tendency to hæmorrhage; and, further, that this hæmorrhage is determined to the navel partly because it is a weak spot, and partly because any obstruction to the circulation in the liver would produce turgidity of the umbilical vessels. He concludes by giving the notes of a case upon which he was called to make the autopsy. In this, however, the jaundice was slight, and it was uncertain whether it preceded or followed the hæmorrhage. [Dr. Van

Cott's theory may be true in a few cases, but in the great majority the association is probably a mere coincidence, since a certain amount of jaundice is so common in the new-born as to have been regarded by some as normal. In others, again, the bleeding stands in the causal relation, and the jaundice is nothing more than what is so commonly seen after hæmorrhage in adults, especially those of dark complexion.—*Rep.*]

Ralph W. Leftwich, M.D.

1425. *Ehring on Bismuth Salicylate: its Use in the Diseases of Children.*—Dr. Ehring has employed bismuth salicylate (Marck's) in 200 cases of dyspepsia, acute and chronic gastric catarrh, gastro-intestinal catarrh, enteritis, phthisical diarrhœa, acid diarrhœa, and dysentery. He gives it, suspended in glycerine or mucilage, because of its insolubility, and because children take pills and powders badly. It is not contra-indicated in constipation. The urine soon becomes more acid, and gives a distinct salicyl reaction; the stools never give this reaction, but quickly become dark in colour. He has never seen symptoms of poisoning. He is far from seeing in the remedy a panacea for all cases, but says that when combined with a suitable diet it is most useful and worthy of trial. Its action on the urine suggests that its employment in cystitis may be advantageous.

1426. *Toeplitz on Intussusception in Children.*—The author communicates four cases of invagination in children, with one recovery. The first symptoms are severe colicky pains, then diarrhœa with great tenesmus and vomiting (stercoraceous vomiting only occurred in one of the cases). Later the stools become bloody, sometimes meteorism, generally from commencing peritonitis. The abdomen is generally soft, so that the characteristic symptom, the swelling, is to be felt. The differential diagnosis is easy. The constipation succeeding diarrhœa of short duration, distinguishes the case from cholera infantum; dysentery, fissure of the anus, and polypus of the bowel are easily recognised. The prognosis is very unfavourable. Recovery occurs through spontaneous reposition or separation of the gangrenous bowel. Treatment is confined to the administration of opium, irrigation of the bowel with water or carbonic acid. Narcosis and laparotomy. The great thing is to establish the diagnosis as early as possible, and then the sooner the operation the better. As to the etiology of the affection we must confess our absolute ignorance.

G. D'Arcy Adams, M.D.

1427. *Evans on a Case of Scurvy in a Child aged Five Years.*—In the *Illustrated Med. News*, January 1889, p. 5, Dr. Julian Evans records the following case. A child, aged 5 years, was admitted into hospital in September 1885 suffering from general weakness and a spongy condition of the gums, but was discharged in about two weeks as cured. In February 1886, however, he was readmitted, and his mother stated that he had been ailing for weeks, complaining of pains in the legs and crying out if moved or dressed. The gums had been swollen and bleeding for some time, and for some weeks he had occasionally passed blood; the bowels had been constipated and the motions offensive. On admission the child was extremely weak and emaciated; over the chest and temples were scattered a few purpuric spots. The gums all round, both inside and outside the teeth, were livid, spongy, and very much swollen. The liver, spleen, and lungs were normal, and the urine was acid, specific gravity 1020, no albumen. The temperature varied from 99° F. in the morning to 102° or 103° in the afternoon. At first it was hard to make the child eat anything except a little bread and milk, but soon he began to take the ordinary hospital diet, and was given lemon-juice, cress, and a mixture containing perchloride of iron. He then made rapid improvement, and by the end of March he was discharged quite well.

Richard Neale, M.D.

1428. *Olivier on the Contagiousness of Infantile Vulvo-vaginitis.*—Two children were attacked with vulvo-vaginitis at the Enfant Jésus Hospital. They were under treatment during four weeks, during which period other cases occurred to the number of fifteen. The disease was not propagated directly by the bed-clothes, but all the children were attended by the same nurses and the same towels, sponges, &c., were used. Moreover, the water-closets were not kept very clean. The contagiousness of the disease was clearly shown by its disappearance when prophylactic measures were enforced. The nurses were ordered to wash their hands in antiseptic solutions before passing from one child to the other, and the use of sponges was stopped. No further case occurred.

1429. *Le Pileur on Infantile Mortality from Syphilis at St. Lazare.*—Fourteen per cent. of the women were subjects of syphilis. Not more than 7 per cent. of the children of syphilitic mothers outlived the first few months of existence. Out of 64,657 births (annual rate for Paris), 9,051 infants would be born of syphilitic parents, and of that number 8,418 either die *in utero* or shortly after birth. Thirteen per cent., therefore, of the total births perish from the effects of parental syphilis.

1430. *Desblancs' Purgative for Infants.*—℞ Resin of scammony, 4 grains; bicarbonate of sodium, 12 grains; sugar, 12 grains; milk, ℥iv. For a child two years old.

1431. *Gaucher's Application in Diphtheria.*—℞ Spt. vini rect., 60 parts; acid carbolic, 5 to 10 parts; camphor, 20 to 30 parts. Fiat solutio. This solution to be mixed with an equal bulk of oil, and applied locally with stiff brush twice a day, gargling freely with carbolated solution in the intervals.

Alfred S. Gubb.

Harper's Magazine contains the following *à propos* lines on what it terms 'A Christian Science Fad':—

Think health and health will find you
　As certain as the day,
And pain will lag behind you
　And lose you on the way.

Why not pursue this same line of reasoning to the bitter end, something after this fashion:—

Think wealth and you will get it—
　A million, more or less;
Think silk and in the closet
　You'll find a gros-grain dress.

Think land when you are drowning,
　Beyond all human reach,
And by this happy theory
　You'll be washed up on the beach.

Think bread when you are hungry,
　And a feast will there be spread;
Think sleep when you are weary,
　And you'll find yourself in bed.

REVIEWS.

Article 1432.

General Paralysis of the Insane. By William Julius Mickle, M.D., M.R.C.P.Lond. Second Edition. Enlarged, rewritten. London: H. K. Lewis. 1886.

General paralysis is a disease unique amongst the *vesaniæ.* It has a place in all the discordant classifications of insanity, and the group of symptoms, mental, motor, and degenerative are so characteristic that no one who has fairly apprehended them can fail to recognise a well-marked case. The pathological appearances are also characteristic and more closely correspond to the symptoms than in any other form of insanity. In some asylums, especially for urban districts, the disease is common, and as the symptoms in the end are very distressing, its treatment requires a great deal of the attention of the medical superintendent. Though general paralysis has been well described in a good many works on insanity, a separate treatise on the subject is sure to be useful. Before Dr. Mickle's book the best monograph we remember was a paper of sixty pages on the subject, by Dr. Crichton Browne, in the sixth volume of the West Riding reports. There is no great sale for special medical treatises which are not text-books; hence the fact that in six years Dr. Mickle's work has come to a second edition is a fair proof that its merits have been recognised by those of the profession willing to study such diseases. The second edition is a dangerous stage in the fortunes of a medical book. The temptation to enlarge, to make the information 'fuller,' is almost always too strong for the author. We can only recall the solitary instance of Syme's Lectures on Surgery, the second edition of which was shorter than the first. This is what it should be: the author should generalise more clearly, make his definitions more concise, cut down all the repetitions and redundancies of the first edition, which will, in most cases, give him room enough for any needful new matter.

The temptation to enlarge has been too strong for Dr. Mickle, and in his second edition the clearness of the outline has been blurred and confused by the crowding in of a mass of details. Dr. Mickle, during the interval between the two editions, has evidently been going on reading all the papers on his subject in European medical literature. In his anxious desire to give to every one his due he quotes everything he can get sight of, so that we have a book about everything that has been written on general paralysis.

This disease, thought by authors to be a product of the worries and anxieties of modern life, seems first to have been clearly described by Dr. Felix Plater, a physician of Basel, nearly three hundred years ago. Dr. Mickle says that the first knowledge of the disease gleams in the pages of Willis (1672). There has been worry and anxiety since the beginning of history, and general paralysis may have existed for thousands of years, although the group of symptoms had not been generalised and described by any physician.

Dr. Mickle defines general paralysis as 'a disease of the nervous system, especially of the brain, marked clinically by (1) some general affections of motility—viz., ataxy, and finally paresis, usually following a definite order and course of development, and especially obvious in the apparatus of speech and of locomotion; also, but in less degree, by (2) sensory disorder or defect, and marked also by (3) mental symptoms, which constitute, or invariably tend, to dementia, but often consist in part of exaltation of feeling, or even expansive delirium. Finally, it is evidenced by (4) certain organic changes in the encephalon and its tunics, often in the spinal cord and membranes also, and sometimes in some sympathetic ganglia as well.'

We can find no fault with this definition save that Dr. Mickle seems to hold too far back the mental derangement which often precedes, and generally goes alongside with, the motor deficiency. However, this consideration is abundantly discussed in the course of the book.

It is difficult to make out Dr. Mickle's opinion whether the temperature in general paralysis is usually below or above the normal. He says that the evening temperature is almost always higher than the morning one, and that it is higher during the paroxysms. The latest observations are those of Dr. Rottenbiller (*Erlenmeyer's Centralblatt*, No. 1, 1889), who finds that during the course of the disease the temperature is generally subnormal. This bears on the question whether this disease is an inflammatory process or not.

It seems to me that Dr. Mickle passes over Tuczek's observations too lightly. Tuczek held that the primary lesion was degeneration of the nerve fibre in the cortex, but it appears from further observations that the nerve fibres in the medullary matter of the brain are often degenerated. In fact there is a degeneration of the whole nervous system, often with hypertrophy of the heart and disease of the bladder.

For diseases that are incurable there is always a long list of remedies, most of them of very short-lived reputation. On the treatment of general paralysis Dr. Mickle gives us fourteen pages. In the first edition he recommended veratrum and iron, he still has some faith in the perchloride of iron, but veratrum is dismissed in the following sentence:—'Veratrum viride I have frequently employed when, together with moderate excitement and evident cerebral hyperæmia, the general frame and visceral health are vigorous.'

On the whole he is extremely cautious in his therapeutic claims, but his advice on the treatment of disease seems judicious and useful. Of the value of Dr. Mickle's work there can be no question. He has completely mastered the subject, and has viewed it in every light and examined every detail. Any one who goes to this book for information on any point connected with general paralysis will be sure to find everything known on the subject.

W. W. Ireland, M.D.

Article 1433.

Section Cutting and Staining. By W. S. Colman, M.B.Lond. H. K. Lewis, Gower Street, W.C.

This is a not altogether unwelcome addition to the rapidly increasing number of works on the subject. Mr. Colman's experience, however, seems to be limited, and it would have been well if he had left certain subjects untouched. On p. 6 he says, 'This is not the place for the description of the microscope as an optical instrument, but some hints as to the selection of one may be found useful.' He then draws attention to some of the desiderata for a good microscope. Nevertheless, by these hints and the list of instruments he especially recommends, it is pretty plain that he himself does not know how to distinguish between a good microscope and a bad one. He is not even familiar with the prices of microscopes, or he would not omit Swift from his mention of makers of cheap and thoroughly efficient instruments.

Amongst hardening processes, Kleinenberg's Picro-Sulphuric Acid solution is given, not only without a caution as to its effects on material containing much lime salts, but the concluding paragraph, on p. 18, may be taken as referring to this solution as a useful decalcifier.

In several points Mr. Colman displays ignorance of the history of methods and instruments; for example, he speaks of Swift's plough, and of Williams' microtome, quite ignoring the fact that the plough was one of the chief points in Williams' invention. Again, on p. 58, he speaks of Rutherford's magenta solution, whereas it is really 'Ferrier's' solution, and is so referred to by Rutherford in his *Histology*.

Both from the preface and from the internal evidence afforded by the book it is clear that the most of Mr. Colman's knowledge of the subject is derived from the practices adopted in one or two laboratories only, with the exception of certain information derived from friends who were not even the originators of the methods as to which they have given him assistance.

As to methods, the information given, so far as it goes, is good though not original; it is, however, a pity that many details are omitted, without which a neophyte would find much difficulty in his work.

Injection, for instance, is referred to on p. 99, but there is no description of how to carry out this most difficult operation.

Endothelium is given as simple squamous epithelium. This is much to be regretted, as it leads the student wrongly to infer that the two are identical.

Both author and reader should be cautioned not to make a practice of cementing balsam mounts, as the cement is liable to run in and injure the preparation; indeed, except in very rare cases, the balsam is of itself a sufficient cement.

Doubtless there may be some who will find Mr. Colman's book useful, although it cannot be said to fill a gap not previously occupied.

J. W. Groves.

Article 1434.

Anatomische, physiologische, und physikalische Daten und Tabellen zum Gebrauche für Mediciner. Von Dr. Hermann Vierordt. Jena: Gustav Fischer. 1888.

This encyclopædic book consists, as its name informs us, of a series of tables, carefully collected from a multiplicity of sources, and relating to different subjects more or less directly connected with medicine. In the anatomical section we find tables of height at different ages, and of different nations, according to the views of various writers; proportions and body-weight of adults and infants; as also a number of facts relating to the size and weight of various organs, at different periods of growth. A number of cranial measurements are given, and following them a collection of data respecting the brain. In fact, so far as this section goes, it may fairly be said that it would be difficult to mention any organ, bone, vessel, or nerve of the slightest importance of which the measurements, often with other kindred points, are not given. At the end of this, the first part, is a useful table showing the weight and size of the body and the appearance and increase of the points of the ossification during the period of intra-uterine life.

The second section, which relates to physiology and physiological chemistry, is the largest in the book, and contains a multiplicity of facts which it would be impossible within the limits of a review to catalogue.

The portions relating to the circulation, and especially the pulse, to the urine, and to the constituents of different kinds of food, may be mentioned as especially full.

The physical section contains a full comparative table of the scales of Fahrenheit, Réaumur, and Celsius, and also a table giving the value of various electrical terms.

An appendix of practical data gives the temperatures of various health-resorts, the periods of incubation of febrile diseases, a comparative dose-table of the German, Swiss, and Austrian pharmacopœias, with other information.

From what has been said, it will be gathered that this is not a book to be read through, but medical teachers especially, as well as others working at physiology or anatomy, will find it of value as a means of keeping constantly at hand collections of figures and statistics with which it is impossible to burden the memory.

Bertram C. A. Windle, M.A., M.D.

Article 1435.

Atlas d'Embryologie. Par Mathias Duval. Paris: G. Masson. 1889.

This most beautifully produced volume is strictly what its name signifies, an atlas containing forty plates, with 652 figures, added to which is just so much letterpress as is needed to make the figures comprehensible. The method upon which it is produced is explained by the author himself. After twelve years of embryological studies he found himself possessed of a complete collection of specimens illustrating the development of the chick. Finding that the study of these enabled his pupils rapidly and easily to acquire a knowledge of the subject, he determined to publish a series of illustrations of the specimens for the use of others. The first plate gives a general view of the whole process of development; commencing with the ovum in the ovary, and terminating with the chick at the moment of 'chipping-out.' The second and third plates illustrate the structure of the ovum, its segmentation, and the formation of the blastoderm. An important point in these plates is that the same object, or a part of the same, is represented as seen under various powers of the microscope, so that the details may be nearly as readily comprehended as if the actual specimen were under examination. In the remaining plates a very valuable plan is adopted which materially increases their usefulness and comprehensibility. On each plate appears a sketch of the embryo, from which the sections were taken, marked with certain red lines, longitudinal, transverse, or oblique, to each of which is affixed a number which corresponds to one of the sections figured on the same plate. The student is thus enabled at a glance to see the exact position and direction of the specimen with which he is engaged. When it is added to this that the same letters are used throughout for the same parts, and that, as a general rule, the longitudinal sections are placed on the left side of the plate, and figured longitudinally, and the transverse on the right, also in proper position, it will be understood that no pains have been spared to make the use of the book easy and pleasant.

The plates are produced in a style for which no praise could be too high, some of the earlier ones especially being quite works of art. In the later plates, which are chiefly of sections, red has been used for the mesoblast—a plan which adds to the clearness without taking away from the figures their value as actual representations of specimens.

The work, being intended for the laboratory table, contains an introduction which gives directions for artificial incubation, for the extraction from the egg of blastoderms and embryos, and their subsequent preparation. This part of the book, though brief, contains many practical hints of much value to the worker, notably the author's method of marking the orientation of the blastoderm. As an imbedding mass, he expresses his preference for collodion, as the first to employ which he establishes his claim in a note.

The author states that he hopes to issue a second atlas dealing with the development of the rabbit as a mammalian type, and to crown his work eventually by a similar series of illustrations of the development of the human embryo.

Those who have possessed themselves of the book under review will hope with us that Professor Duval will lose no time in accomplishing both objects. BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1436.

Memoirs and Memoranda in Anatomy. Vol. I. By Professor JOHN CLELAND, J. Y. MACKAY, M.D., and R. BRUCE YOUNG, M.B. Williams & Norgate: London & Edinburgh. 1889.

THIS volume consists of a number of essays and notes emanating from the Glasgow School of Anatomy, some of which have previously seen the light in the pages of the *Proceedings of the Glasgow Philosophical Society*, whilst others are now for the first time given to the public. As the Memoirs are sixteen in number and the Memoranda twenty-nine, it is obvious that we cannot do more than allude to some of the more important within the limits of this review.

The first paper is by Professor Cleland, and deals with the subject of birds with supernumerary legs. Specimens of this kind are by no means rare, and have been described by many writers, yet all apparently have missed one point of the first importance in connection with them, namely, the true relation of the limbs to one another. It seems to have been assumed that the two smaller limbs formed one pair, the two larger the other. Professor Cleland has, however, shown that this view is totally incorrect; as a matter of fact, the pairs are formed by one functional and one non-functional limb on each side. To quote his words: 'In cases of supernumerary legs connected with the sacrum or perinæum, the legs developed as the proper legs of the animal belong originally to two different pelvises, being the left limb of a left pelvis and right limb of a right pelvis,' [*Note.*—Professor Cleland has informed the reviewer that the words 'left' and 'right' before the 'pelvis' in each case have been transposed by a clerical error. The quotation as given above is corrected.—*Rev.*] 'and that, in these circumstances the appended limbs may be two, or one of the two may be suppressed, or there may be a composite limb formed by the undivided blastema for two adjacent limbs of two pelvises.' A description of several human cases of extra-pelvic limbs is given, and their nature explained in the light of the above rule.

A second essay by the same author deals with 'Teratology, Speculative and Causal,' and contains a classification of monstrosities from the aspect of causation. Any attempt to unravel the tangled web of teratological classification will be welcomed by those interested in the study of the subject, and we are firmly of opinion that Professor Cleland has adopted the right method in adopting etiology as his basis. As an example of how his method is applied the following quotation may be given:—'The varieties and degrees of duplicity are attributable to some such circumstances as the following—1, the period of application of the excitant to division; 2, the amount of excitation; 3, the interference of the adjacent parts of more or less completely divided embryos, each with the growth of the other; 4, the equal or unequal development of the two embryos produced on one ovum, or of the doubled portions of a partially divided embryo; 5, the commencement of fission at the caudal or cranial end of the embryo, or at both ends; 6, the operation of the law by which symmetrical parts tend to adhere one to the other.'

Any such scheme in the present condition of our knowledge must be, to a large extent, tentative, and for this reason workers in teratology will perhaps scarcely feel inclined to express entire consent to this classification in all its details, nor would its author probably expect any such unqualified acquiescence, but as a starting-point and a groundwork for future observations we believe it to be of the highest importance. We have only space to mention the titles of two other of Professor Cleland's contributions, both well worthy of a detailed examination were it here possible. These are, 'On the Form of the Human Skull at Different Ages and in Different Nationalities,' and 'On Certain Distinctions of Form hitherto unnoticed in the Human Pelvis, characteristic of Sex, Age, and Race.'

Dr. Mackay contributes two papers on hermaphroditic and genito-urinary malformations, and several on the arterial system. Of these the most interesting is one on the arterial system of vertebrates homologically considered, which contains a criticism of a paper of Professor Macalister's on the morphology of the arterial system, with the author's own views on the subject, as also his explanation of the homologies of the branches of the abdominal and pelvic arteries.

Mr. Young's chief papers are 'On the Morphology of the Cervical Articular Pillars,' 'On a Lock-limiting Extension of the Neck,' 'On the Grooves separating the Patellar from the Menisco-tibial Surfaces of the Femur,' and 'On Locking of the Knee-joint in Full Extension.'

The Memoranda are preceded by a portrait of the late Professor Goodsir from the pencil of Professor Cleland. The remaining eight-and-twenty notes deal with a number of subjects connected with anatomy, comparative anatomy, and teratology.

A collection of scientific papers and notes such as this must always appeal to a somewhat limited circle of readers, though there must still be a number of Goodsir's pupils who would be glad to possess themselves of the book for the sake of his portrait; but it will be welcomed, and its successor's appearance awaited, with interest by all workers in the field of scientific anatomy.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1437.

Masso-Therapeutics; or, Massage as a Mode of Treatment. By WILLIAM MURRELL, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital, &c., &c. Fourth Edition. London: H. K. Lewis. 1889.

IN the preface, the author informs us that he has employed the term 'masso-therapeutics' to mean massage as a therapeutic agent, as distinguished from massage as a means of earning a living, or as a modified form of hotel keeping. He protests, even more energetically than before, against massage as an universal panacea and massage by incompetent but greedy people. It is undoubtedly true that massage lends itself to persons quackishly disposed much as is the case with electricity. They are both valuable agents in proper hands, but the reverse when simply regarded as a means of *exploitation* by unscrupulous persons.

The present edition shows a marked increase of size compared with its predecessor, a quantity of fresh matter having been introduced. More minute details are moreover given for the performance of the different manipulations, and several new illustrations, the execution of which leaves nothing to be desired, have been added. The author very judiciously devotes a good deal of space to circumscribing the limits within which massage may fairly be expected to be of benefit. Its indiscriminate and incautious employment cannot fail, if continued, to bring the practice into disrepute. An amusing sketch of a visit to a certain English watering-place is embodied in the introductory chapter, but, however applicable to that particular resort, is certainly not so to most others. Throughout the work the author's style is racy and humorous, and the text is altogether pleasant reading. The rapid succession of editions is evidence that readers appreciate this fact, *inter alia*. ALFRED S. GUBB.

MESSRS. BURROUGHS, WELLCOME, & Co. announce that they have received from the printers 2,000 copies of the *A.B.C. Medical Diary and Visiting List*, bound in morocco, and which they are willing to forward post free to medical men at the nominal cost of 1*s.* per copy. The book is a good investment, as the original cost must have been many times that sum.

HYSTERICAL ANÆSTHESIA.—M. A. Pinet is led to conclude, from his researches concerning hysterical anæsthesia, that the stimulation of an anæsthetised region determines the visual image of the region stimulated, although the patient does not experience any tactile or muscular sensation. This visual image may be thrown on to a screen which the patient is made to contemplate steadily; its duration corresponds to the duration of the stimulation which causes it. If the anæsthetised region be pricked, a dark or light point will appear on the screen; a drawing traced on the same region with the points of a compass is reproduced in coloured lines on the screen. The patient is perfectly unaware of the connection between the image on the screen and the stimulation of the anæsthetised portion of his body.

NEW PREPARATIONS.

TASTELESS CASCARA SAGRADA PREPARATIONS.

THERE is probably no modern drug that has excited more attention than cascara sagrada. It was originally objected to in consequence of its objectionable flavour, due to the bitter principle contained in it. Further research has proved that it is possible to divest the drug of this bitter flavour, and so render it more palatable without impairing its efficiency. In February 1888 Messrs. J. Le Roy Webber & H. F. Meier published, in the *American Journal of Pharmacy*, the results of an elaborate study of cascara sagrada made in the analytical department of the laboratory of Messrs. Parke, Davis, & Co., Detroit, Michigan, U.S.A., with especial reference to the character of its bitter principle, with the immediate view of determining if the bitter principle was not separable, and the ultimate aim of ascertaining if to its presence was due the well-known tonic laxative action of the drug. Since then these gentlemen, who have continued their investigations, have published additional notes on the subject.

The following explanatory facts may be cited:—

1. The resins of cascara are not bitter, and form soluble compounds with the alkalies and alkaline earths.

2. The glucoside, though the parent or source of the bitter tonic principle, is itself devoid of bitterness.

3. The glucoside appears to be capable of undergoing decomposition in the normal gastric juice of the stomach, with development of the bitter principle there (see note 8).

4. It is thus evidently possible to prepare a product from cascara comparatively tasteless, and yet containing all the elements to which both the laxative and tonic properties are due.

5. Further experiments with green, unripe fruits show like results, as with frangula, which seems to contain an excessive amount of the ferment (referred to in the original article), and which does not always exhaust itself entirely in even two years.

The same properties are shared by cucumbers, unripe tomatoes, &c., as the plants in which similar ferments exist seem to have a legitimate use for them, and during the performance of their functions and in further ripening—when the fruit or vegetable substance is removed from the tree or plant—these ferments die a natural but rather slow death.

It will readily be understood that a substance containing these ferments, when brought into contact (in the stomach) with fresh material to act on, must produce like results as in its native sphere of action. These ferments belong to the same class of unorganised and soluble ferments as diastase and pectase, pepsin and papain, &c.

6. *Notes to the Experiment corroborating the Existence of a Ferment in Cascara.*—If the decoction, to which yeast has been added, and which after fermentation contains a small percentage of alcohol, be allowed to stand sufficiently long, acetification takes place with the precipitation of a small amount of resins from the formerly neutral liquid, but it does not get bitter. A very dilute acetic acid has no noticeable effect in developing this principle. Only when sufficiently concentrated and aided by heat does this result ensue in the case of acetic acid, hydrochloric and lactic acids (the normal con-

stituents of the gastric juice), and seem to be most affected, as also the other strong mineral acids, such as sulphuric, &c.

7. The brown resin (present to a much larger extent in aged than in fresh bark) seems to possess the greatest laxative power.

8. The occurrence of the intro-gastric decomposition of the glucoside is not demonstrable satisfactorily when attempted in the usual way—viz. in flasks or by other means exterior to the body at the normal temperature of the human subject. Such a decomposition can, however, readily be provoked by the inter-action of free mineral acids at a more elevated temperature, as is shown by the development of an intensely bitter taste. Physiological experiments have also shown that when resins of cascara are administered separately from the decomposable constituents accompanying them in the bark, even in doses exactly equivalent to the fluid or solid extract, their action is disproportionately enfeebled. We feel warranted from this and numerous other circumstances in holding to the proposition that in the living organism there are undoubtedly other factors concerned than the usual chemical and physical means which we can employ in laboratory experiments. The very occurrence of free hydrochloric acid in the gastric juice is sufficient evidence of unusual dissociating and constructive forces at work in the organism. We do not absorb or inject hydrochloric acid in a free state, and it is undeniably derived chlorides (sodium, calcium, &c.) ingested as such, while the alkaline elements of these salts find employment in other parts of the organism, as in the bile and blood.

9. The existence of a glucoside in cascara sagrada has been called in question by various investigations, while the endeavour to isolate the substance in a crystalline condition has not yet been successful in verification of the results reported by Professor Wenzell, who describes minutely the physical and chemical qualities of this body; it is, nevertheless, the fact that there is a constituent of cascara sagrada which, when purified with extreme care, so that all traces of glucose, tannin, and other foreign bodies are removed, exhibits all the properties of a glucoside. On boiling with dilute acids, it splits up into a resinous body, an intensely bitter substance, glucose; the development of the latter can be demonstrated by its behaviour with Fehling's solution, and also by the fermentation test, the latter, of course, being most conclusive. These properties are not possessed by emodin, which has been alleged to be the purgative principle.

The result of these investigations was that a line of comparatively tasteless preparations of cascara sagrada was at once placed on the market by Messrs. Parke, Davis, & Co., the manufacturing chemists of Detroit, Michigan, and samples widely distributed to the medical profession for trial, that the efficacy of the new and less bitter preparations might be compared with the old ones. These new preparations of the drug, largely freed from the bitter principle, were designated 'Formula 1887.'

These new preparations are in a sense still on their trial, and it is but natural that further experience is needed to punctuate their therapy with any degree of positiveness. When we recall the fact that over a decade has elapsed since the introduction of cascara, and that highly important features inseparable from its successful administration are not yet clearly recognised, we must expect to sometimes meet with discordant results. These discordances often depend upon error of observation, and the physician, however conscientious, is no exception to the occasional illustration of this imperfection as a necessarily human attribute.

The great value of cascara sagrada in constipation, and the general objection to its bitter taste, led dealers in the drug, after the investigations quoted had been published, to hasten to advertise tasteless cascara sagrada, and now there are few who do not announce it in this form, though it is doubtful if many take the trouble to actually separate the bitter principle, often relying on less bitter substitutes or inferior varieties of the drug to secure a product comparatively free from bitterness.

The consumption of cascara sagrada has been so large that there is at present a great dearth of the genuine bark. Even the inferior varieties, adulterated with spurious barks, which are offered in the open market, have greatly advanced in price, and advices from the *habitat* of cascara sagrada state positively that no more of the genuine bark will be obtainable until next fall. The result of this scarcity will be to flood the market with inferior and medicinally inert preparations of the drug.

There are just now three excellent reasons why physicians should exercise particular care in prescribing their fluid extract of cascara sagrada. It is but reasonable to suppose that the present high price of the drug has stimulated inexperienced collectors on the Pacific Coast, and well-authenticated reports reach us that the market is soon to be flooded with supplies of a spurious bark gathered at an improper season, which fully confirm this supposition. This drug will, doubtless, be quickly consumed by those manufacturers who are dependent upon the open market for their supplies, and who have suffered serious inconvenience owing to the scarcity of true *Rhamnus purshiana.* The three reasons may be briefly as follows:—

First. It has been settled beyond question that the therapeutic effects produced by *purshiana* are much superior to those of buckthorn (*Rhamnus frangula*) or other species of the *Rhamni*, and therefore disappointment may be expected to follow the administration of products of spurious substitutes for the true *Rhamnus purshiana.*

Second. Much of the bark foisted upon the market has been gathered since the sap accumulated in the roots, which is obviously wrong, for, even assuming it to be genuine, it must be inferior to a drug gathered at a favourable season.

Third. It is well known that disagreeable griping effects are produced by most drugs from the buckthorn family when fresh, and cascara sagrada should therefore never be employed until it has seasoned for at least one year.

Messrs. Burgoyne & Co., of Coleman Street, are prepared to supply preparations of the drug made from genuine *Rhamnus purshiana*, by Parke, Davis, & Co., who first introduced it, and have made for many years a careful study of its nature and method of manufacture, and who assert they only use the bark after it has been cured for a year or more. This firm assure us thatthey have abundant supplies of well-cured bark, and will maintain the excellence of their product.

A most promising new therapeutic application of cascara sagrada has recently been reported in the medical journals of England and America, namely, the especial action of the drug in rheumatism.

À priori, it would seem reasonable to assume that such a valuable stimulant to the emunctories as cascara sagrada has proved, would be of service in relieving the blood of those waste products the excretion of which is considered to be at fault in rheumatism. Whether the drug possesses in addition to this a specific curative action, as the results would indicate, remains to be confirmed by further experiment. The facts already observed encourage its further employment, both alone and in combination with the salicylates. The palatable preparations of cascada sagrada, as cascara cordial, make an excellent vehicle for the salicylates, tending to prevent the distressing cerebral symptoms of the latter (see article by R. S. Henry, M.D., *Philadelphia Medical and Surgical Reporter*, Oct. 23, 1886), and a combination of these drugs would ensure the remedial action of both.

TABLOIDS OF PHENACETIN.

MESSRS. BURROUGHS, WELLCOME, & CO. have sent us a sample of their Tabloids of compressed Phenacetin, each of which contains five grains of this valuable antipyretic and analgesic. It is employed in much the same class of cases as antipyrin, the popularity of which it seems likely to share. As phenacetin is but slightly soluble in water, these tabloids require to be crushed or chewed before swallowing, any disagreeable taste being overcome by the addition of a small quantity of saccharin, an innovation which this firm were the first to introduce for the purpose long since, many of their tabloids being now similarly prepared.

VAPOROLES.

MESSRS. BURROUGHS, WELLCOME, & CO., indefatigable in their issue of pharmaceutical novelties, have manufactured, at the suggestion of certain leading laryngologists, a series of 'Vaporoles,' containing medicaments in suitable quantity for inhalation purposes. They consist of small glass capsules enveloped by a layer of cotton-wool, and are crushed and dropped into the inhaler when required for use. The list comprises :—

1. Vaporole Carbolic Acid, 20 min.
2. Vaporole Amyl Nitrite, 5 min.
3. Vaporole Ether, 30 min.
4. Vaporole Tinct. Benzoin Co., 30 min.
5. Vaporole Chloroform, 30 min.
6. Vaporole Creosote, 10 min.
7. Vaporole Cubebs and Lemon, 5 min.
8. Vaporole Iod. Tinct., 10 min.
9. Vaporole Juniper, 2½ min.
10. Vaporole Terebene, 10 min.
11. Vaporole Pinol, 10 min.
12. Vaporole Eucalyptus, 10 min.

They are novel and ingenious appliances, and will doubtless be found convenient and serviceable in practice.

VINOLIA.

WE have received from Messrs. Roberts & Co., of New Bond Street, W., samples of a new preparation for eczema and allied conditions, and to which the distinctive name 'Vinolia' has been given by the inventors. It is a homogeneous antiseptic compound containing Vinolia basis, together with a small proportion of zinc, naphthol, &c. It is quite free from fatty acids and from the objections to which ointments with the usual mineral or animal bases are open. Apart from the value of the basis as a vehicle for the exhibition of medicinal substances, adapted for external use, Vinolia is itself a very elegant and soothing application. It appears to be readily absorbed, and produces a marked sedative effect in various irritable and irritated conditions of the skin. It has been employed by various medical men in the treatment of pruritus vulvæ, and in the itching of jaundice, eczema, &c., with very satisfactory results. Both eczema and pruritus are troublesome ailments, oftentimes severely taxing the skill and resources of the medical man to afford relief, so that if the experience of others confirm the numerous good results already obtained, Vinolia will find an extended sphere of usefulness.

The Vinolia Superfatted Soap is the result of an endeavour to produce a soap which should be free from the irritating effects of the ordinary soap. The problem is claimed to have been solved by the manufacture of a soap containing some free saponifiable fat instead of an excess of alkali. Under ordinary circumstances, when soap is dissolved in water, more or less alkali is set free, and this drawback seems to have been effectually overcome in the present instance. We note that Jamieson, in his excellent work, highly recommends a superfatted soap, as also does Professor Unna, and the late Dr. Milner Fothergill was among the first to insist upon the fact that only a superfatted soap was suitable for the human skin. The Vinolia soap may, therefore, be used even for the most irritable skin without the risk of producing excoriation, &c. It is highly spoken of by some of the leading authorities for skin affections and tender skins.

NEW MEDICINES.

THE BOURBOULE WATERS.

THESE well-known waters, samples of which, in bottle, have been forwarded for our inspection by Messrs. Ingram & Royle, the sole agents for the supply in England, rejoice in a reputation for the treatment of certain categories of disorders, which is almost unique. They contain, among many other bodies, arseniate of sodium to the extent of nearly two grains to the gallon, and this fact at once indicates a large field of usefulness. It is not, however, the mere presence of this salt of arsenic which confers their therapeutic properties on these waters, but the fact that they also contain the salts of potassium and sodium which exist naturally in the blood, and the lack of which constitutes or paves the way to a whole series of diseases. While analysis enables the chemist to state approximately the nature of this or that spring, it does not seem competent to enable him to manufacture waters in the laboratory possessing the same medicinal properties as the natural water. This is evidenced by the trouble and expense patients are willing to incur in order to obtain the latter. It is a matter of clinical observation that an amount of arsenic which would give rise to uncomfortable symptoms if administered in the ordinary form, can be assimilated by means of the Bourboule waters without any, save advantageous, effects on the stomach and constitutionally. The water is clear, colourless, and inodorous, with a taste that is at first acid and then alkaline. It gives off a considerable quantity of gas at the springs. The complaints for which these waters are prescribed are :—anæmia and chlorosis, scrofulous manifestations, chronic rheumatism, diabetes, and albuminuria. Diseases of the skin, such as herpetic affections, eczema, psoriasis, and many chronic eruptions. According to Dr. Vintras, it is also beneficial in chronic laryngitis, asthma, and affections of the respiratory tract generally. As might be surmised, the waters are largely resorted to by ex-dwellers in malarial districts, who are thus enabled to rid themselves of the traces of ague remaining after malarial attacks. We are informed that a constant supply has been provided, and patients suffering from diseases amenable to their beneficent influence will thus be enabled to carry out the *cure* at home.

DIETETIC NOVELTIES.

'SANTHA' DIGESTIVE TEA.

THIS is decidedly a new departure in dietetics, and is the first serious attempt that we have met with to counteract the undoubtedly injurious effects of the large amount of tannin which enters into the composition of the cup that cheers, &c., as usually prepared. This preparation, manufactured by the Santha Tea Company, Darjeeling Works, Penarth Street, Hatcham, of which samples have been submitted to us for examination, is said to consist of a dry extract of tea, prepared *in vacuo* with gelatine and a little sugar. The value of the process consists in that the tannin combines with the gelatine to form a soluble subtannate of gelatine, which deprives the tannin of its injurious properties. It is thus well adapted for the use of tea worshippers and invalids whose digestive apparatus resents the ingestion of the ordinary infusion. It has the additional advantage of being easy to prepare without a teapot and with hot (not boiling) water. The tea thus prepared possesses the aromatic and stimulating qualities of the crude leaf, minus its astringency. We have examined samples of the tea from which the extract is made, and can certify that it leaves nothing to be desired.

NEW INVENTIONS.

RAZORS FOR MEDICAL MEN.

A QUICK-SHAVING razor is doubtless a very useful thing for medical men when having to complete their toilet rapidly, and the one under notice, the invention of M. A. Arbenz, of Great Charles Street, Birmingham, is useful from this point of view. The Arbenz razor is not made in one piece, the blade is a separate portion and is slid into a groove in the back part or frame. Additional blades are supplied for exchange or to suit the state of the beard. Being remarkably thin throughout, these blades get through their work much more quickly and with greater ease than most razors, and do not require the usual continuous stropping to provide a keen edge. A special strop has been invented to suit the blade.

MACFARLANE'S PATENT FOOTREST CLOSETS AND URINALS.

THE requirements of India in relation to certain sanitary appliances are somewhat different to those of most other countries. Messrs. Walter Macfarlane & Co., of Glasgow, the well-known sanitary engineers and ironfounders, have therefore patented a number of urinals, latrines, &c., adapted to Indian habits, which are copiously explained and illustrated in a supplementary catalogue issued by them. The long experience of the firm, and their success in providing public conveniences for almost every part of the civilised world, is a guarantee that in directing their attention to our Indian Empire the long-felt and admitted want in that country is now fully provided for. The system (as will be seen by the illustrations) gives evidence of a practical knowledge of the habits and requirements of the natives of India with regard to such accommodation, and the most careful thought appears to have been given to every detail. One notable feature in these latrines renders them specially suitable to hot climates. The outside screens or walls are principally built of finely perforated plates, which allow the escape of all foul odours and admit currents of fresh air, while the entire structure, being of iron, is kept cleaner and sweeter than is possible when brick, wood, or galvanised sheets are the materials used. Public latrine accommodation for the cities and towns of India is a subject in which all authorities there are directly interested, and in view of the insanitary condition of such cities as Calcutta, appliances such as those described and illustrated will doubtless be inspected with considerable interest by those charged with the care of the public health in India. Messrs. Macfarlane's system is already in use on certain Indian railways and by some municipalities, but there is a wide field still open for its extension. The latrines, &c., are also in use in some parts of China and the Straits Settlements. The illustrations accompanying this notice will make clear the arrangements to those interested in the erection of such apparatus.

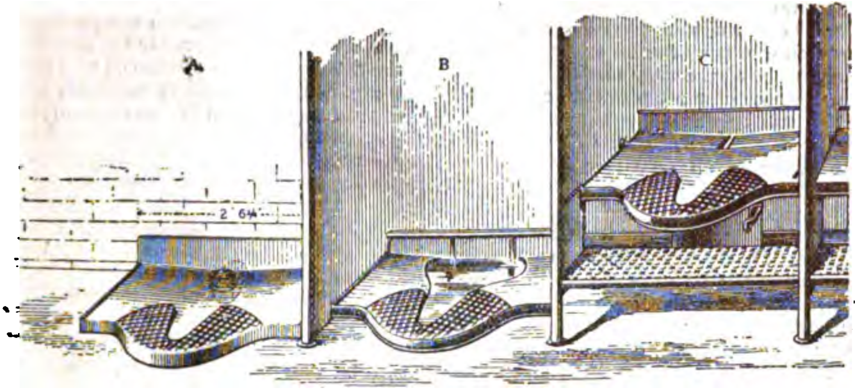
Fuller information can be obtained by writing to Messrs. Macfarlane for their Sanitary Catalogue. The latrines are constructed to apply to places where the contents are discharged into sewers, this being effected by an attendant at stated times where the water supply is restricted, and for automatic discharge at stated intervals, which can be regulated to order. Also for situations where no drains are available, in which case the Pan System is adopted.

THE TUSON HELMET.

SCARCELY less important to the soldier, in a tropical climate, than his rifle and ammunition, is the helmet which he has to wear, by order, as a sun-protector. In the past, thousands of lives have been lost, on the line of march and in action, from the soldier having to wear a head-dress very objectionable, alike on the score of material and design. Many of the varieties of head-gear which have at different times been worn by the British soldier have, not without reason, been termed 'ray-traps.' If they had been designed to facilitate and to ensure an attack of sunstroke, instead of to avert it, they could scarcely have served the purpose better than they have done. It is allowed by many who are very well qualified to offer an opinion on such a subject, that even the present regulation army helmet (whether for the officer or the private soldier) is faulty in many respects.

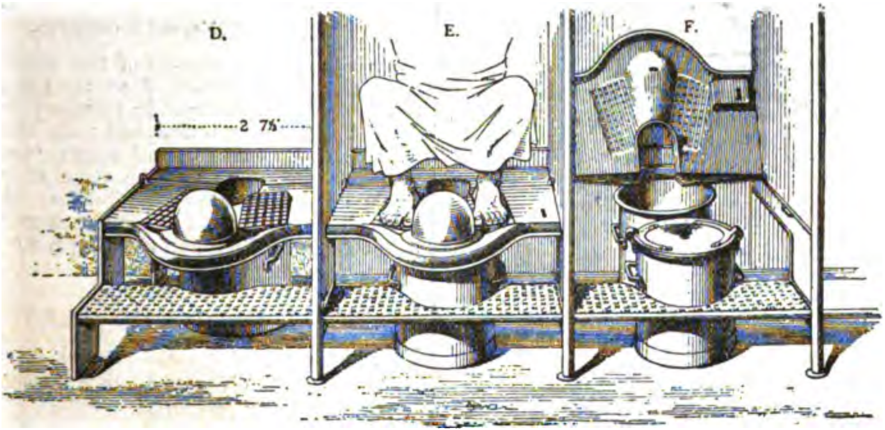
With the view of rectifying this essentially important part of the soldier's dress, Surgeon-General John E. Tuson, of the Indian Medical Service, has designed a helmet which seems to be well worthy of general adoption. The essential advantage of this helmet consists in the fact of its presenting a double chamber throughout, both as to the crown and the brim, and this without addition to its weight; indeed, it is lighter than the present regulation head-dress of the army. It is also an improvement

MACFARLANE'S PATENT FOOTREST URINALS.



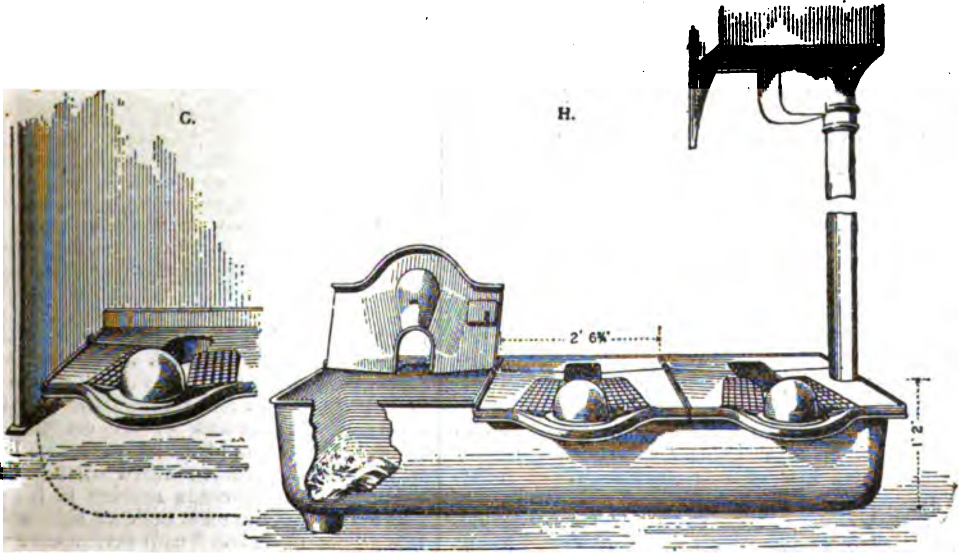
A. Dry urinal to connect with drains. B. Running water urinal.
C. With pan where there are no drains.

MACFARLANE'S PATENT FOOTREST DRY PAN CLOSETS.



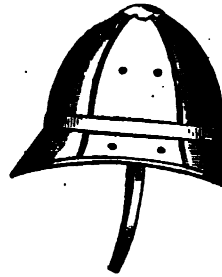
D. With one pan for collecting fæces and discharging liquid.
E. With two pans for collecting fæces and urine separately. F. Footrest raised.

MACFARLANE'S PATENT FOOTREST TROUGH WATER CLOSETS.

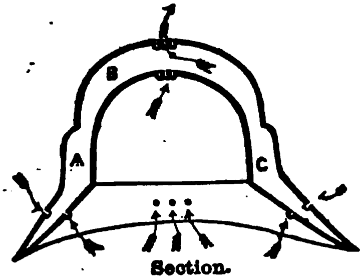


G. With screen and trough sunk flush with ground.
H. Applied to patent automatic trough. Shown above ground.

as regards shape, inasmuch as it is less cut away at the sides than the regulation helmet, and consequently it comes down lower, and affords more complete protection to the temples and the sides of the head. The back of the head of the wearer and the upper part of the spine are also better protected, from the fact of this helmet being less vertical, and more extended horizontally behind. Internally, there is an absence of all constriction round the head. The material, consisting as it does of felt and cork, covered with white 'drill,' ensures durability; while the white covering adds much to its power of protection from the sun's rays. The helmet is waterproof, and from its peculiar construction, to a great degree, swordproof. But, as noted above, its greatest value lies in its being a double-chambered helmet throughout, and yet wonderfully light. The direct action of the sun is upon the chamber, and not upon the head of the wearer.

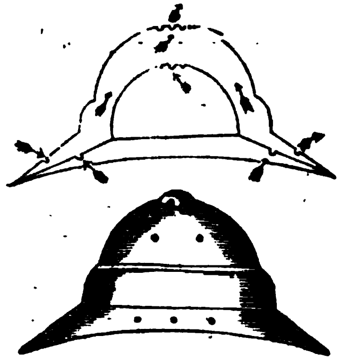


The Helmet.



Section.

Should the 'puggaree' be removed or lost, the hat, from its peculiar formation, is capable of affording more protection than any other. Considering all these points of importance, in which the helmet certainly excels, it is not surprising that it has been highly approved by those who are most capable of passing judgment on it. H.E. Sir Frederick Roberts, Commander-in-Chief in India, thinks very favourably of the helmet, and the late General Sir Herbert Macpherson, Commander-in-Chief of the Madras Army, regarded it as a perfect ventilating helmet and sun-protector. Sir Donald Stewart has worn this helmet for some years, and pronounces it the best sun-protector he has seen. It is stated that the Director-General of the Army Medical Department has strongly recommended its adoption to the War Office. Sir Joseph Fayrer, after careful examination of the helmet, thinks most highly of it, and considers that (on account of its strength and lightness combined) it is more efficacious than any head-dress he has yet seen in the British Army. He regards it as admirably suited for India, and well worthy of being issued to our troops in all hot climates. This helmet has also been adopted by the French Government for the use of their naval officers. With such high testimony in its favour, the 'Tuson helmet' is evidently worthy of immediate adoption for British troops in all parts of the world. It may reasonably be expected that, by its use, the percentage of attacks and deaths from sunstroke will be materially reduced, and that thus a great saving, both in life and money, may be secured.



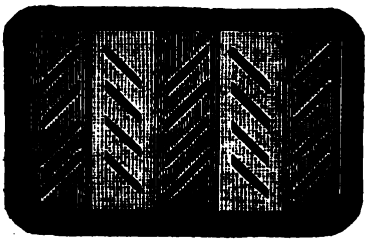
The Fishing and Shooting Cap.

The subject is one worthy of the consideration of the authorities at Whitehall, on the grounds alike of State expediency and public economy.

Dr. Tuson has also designed a double-chambered 'fishing and shooting hat,' which 'looks well,' is wonderfully light, and at the same time protective on the same principle as the helmet. Annexed are accurate illustrations of the above described 'Tuson helmet,' and 'fishing and shooting hat.'

THE ELECTROID PLASTER.

Messrs. Everest & Co., 6 Oxford Circus Avenue, W., have introduced a patented plaster under this denomination. The plaster is composed of one of Mr. de St. Dalmas' simple adhesive edge bases, to which are affixed strips of thin tissue foils of different metals, superimposed at their edges. The adhesive material keeps these flexible electrodes in close contact with the skin, and the current of electricity is therefore uniform and cannot be interrupted. These plasters are no thicker than an ordinary one, and can be used in exactly the same manner. An illustration of the invention is appended. The electroid plaster is claimed to combine the benefits of an ordinary one—viz. warmth, with a mild continuous electric current, which is clearly demonstrated when tested by the galvanometer. There is nothing in it to rub or in any way injure the most delicate skin, and it can be taken off and replaced with perfect ease when using the bath, &c. The price is *2s. 3d.*



SLACK AND BROWNLOW'S GOLD MEDAL FILTERS.

The following sketches show new patterns of filters made by Messrs. Slack & Brownlow, of Manchester, who have been manufacturers of these articles for over half a century.

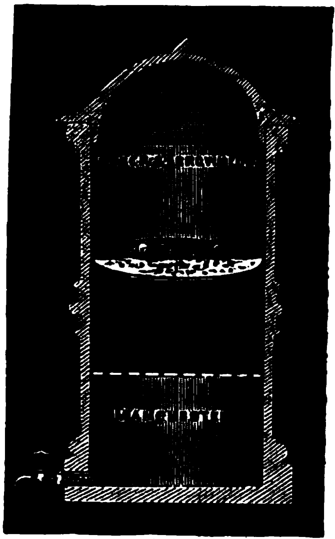


Fig. 1.

These filters are fitted with a movable plate, so that when necessary the carbon may be taken out, thoroughly washed in clean water, and replaced. This carbon is specially prepared, and is a most powerful medium, completely removing from water every trace of lead, all organic matter, and the microbes and bacteria so frequently the cause of zymotic diseases.

Fig. 1 is the cheapest and simplest pattern manufactured, and is offered with every confidence to those requiring a reliable filter at a low price.

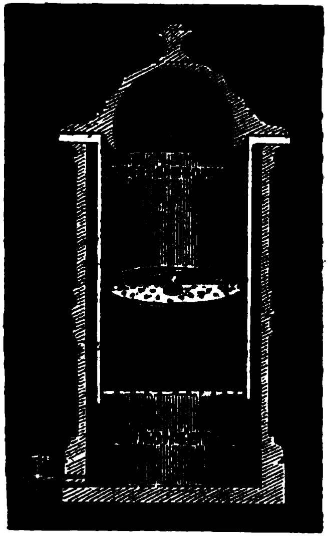


Fig. 2.

Fig. 2 is fitted with a movable lining or inner vessel, allowing access to every part of the interior, which may thus be kept perfectly sweet and clean, a very important addition.

These filters come before the public with the *imprimatur* of Alfred H. Allen, Esq., President of the Society of Public Analysts, and Public Analyst for Sheffield, who has recently tested them, and who speaks very highly of their power of removing dissolved lead from water. It may be noted that over fifty Gold and Silver Medals have been awarded to Messrs. Slack & Brownlow for the superiority of their various classes of filters.

A NEW MICROSCOPIC LAMP.

The *Münchener med. Wochensch.*, No. 1, 1889, contains a description of a very convenient lamp, in which advantage is taken of the circumstance that light undergoes total reflection from the surface of glass, when the angle of incidence does not exceed 40° or thereabouts. An ordinary lamp is placed near the microscope, this lamp is surrounded by a zinc cylinder. From the lower part of the lamp a glass tube proceeds through a hole in the zinc, opposite the flame, to the lower side of the microscope-stage; this tube is bent at an angle somewhat less than 40°, and thus the light is reflected upward along the tube directly to the object to be examined. An 'intense' illumination is given, which is perfectly under control, while the operator's eyes are unaffected by it. The lamp is small and inexpensive (15*s.* for a paraffin, 20*s.* for a gas lamp). It may be procured from W. Gümbel, Munich, Türkenstrasse No. 40.

WOOLLEN 'HYGEIA' AND LINEN TUSSORES.

The necessity of wearing light woollen garments next the skin is as great if not greater in hot than in cold and temperate climates. Illnesses and fevers arise in hot climates from chills more than from ayn other cause. It is well known also that wool, by absorbing the perspiration, and by its own conduction of heat, is at once the coolest and the most comfortable material to wear under a scorching sun or when enduring great physical fatigue. It is necessary, however, that the woollen garments to be worn in India should be of an extremely light and gauzy material. In the 'Hygeia' All-Wool Sanitary Underwear of the Donegal Industrial Fund, 43 Wigmore Street, London, the desiderata of pure wool, perfect fit, and extreme lightness have been attained. This underwear is made on hand frames, of the finest natural coloured or white wool, and is shaped exactly to fit the figure. The comfort of a well-fitting under-garment is obvious to gentlemen, but is a matter of real importance to ladies. Such fit can only be attained in garments carefully woven by trained hands. In price, also, 'Hygeia' compares favourably with any similar underwear made by power. But having once protected the frame from chills by woollen underwear, it is, we consider, not necessary to carry the theory to its extreme limit, and declare, as Jaeger does, the necessity for discarding the clean linen shirt and collar. In fact, in hot climates, linen is as pleasant to wear outside, as it is necessary to wear wool inside. Its cool touch and gleaming surface are grateful to the hand and eye. Linen has only lately been used as dress fabrics, and the beautiful linens, tussores, flaxinas, and lawns introduced, and in many instances designed, by the Donegal Industrial Fund, are indistinguishable from silk by their lustre, softness, and colour.

MISCELLANY.

Dr. De Watteville, Physician to the Electro-Therapeutic Department, St. Mary's Hospital, has been elected a corresponding member of the Reale Accademia Medico-Fisica of Florence.

Various complaints have been made concerning the chloroform employed for anæsthetising patients in the Paris hospitals. It is said that this chloroform is of very inferior quality.

The Bressa Prize.—The Royal Academy of Sciences of Turin gives notice that from Jan. 1, 1889, the new term for competition for the seventh Bressa Prize has begun, to which, according to the testator's will, scientific men and inventors of all nations will be admitted. A prize will therefore be given to the scientific author or inventor, whatever be his nationality, who, during the years 1887–90 'according to the judgment of the Royal Academy of Sciences of Turin, shall have made the most important and useful discovery, or published the most valuable work on physical and experimental science, natural history, mathematics, chemistry, physiology, and pathology, as well as geology, history, geography, and statistics.' The term will be closed at the end of December 1890. The value of the prize amounts to 12,000 Italian lire. The prize will in no case be given to any of the national members of the Academy of Turin, resident or non-resident.

The Founder of Guy's Hospital.—Mr. J. W. Butterworth, F.S.A., has made a discovery concerning Thomas Guy, the founder of Guy's Hospital. Tradition has handed down an impression that Thomas Guy was a mere vendor of old books, but by searching the registers of the Stationers' Company Mr. Butterworth has been able to find several entries supporting his theory that Guy was not merely a bookseller but a publisher. Mr. Butterworth picked up at Messrs. Sotheby's a volume of poems 'printed for Thomas Guy over against Lumber Street, 1739.' The little volume was offered for the acceptance of the treasurer and governors of Guy's Hospital, that it might be preserved; and in thanking Mr. Butterworth for his gift the governors give an assurance that it 'should ever after be preserved at this hospital with the other relics of Thomas Guy already possessed by them.'

In a recent meeting of the Hungarian Academy of Sciences, M. Joseph Körösi, director of the Budapest Statistical Bureau, read a paper on 'The Influence of Parents' Ages on the Vitality of Children.' M. Körösi has collected about 30,000 data, and has come to the following conclusions:—Mothers under 20 years of age and fathers under 24 have children more weakly than parents of riper age. Their children are more subject to pulmonary diseases. The healthiest children are those whose fathers are from 25 to 40 years of age, and whose mothers are from 20 to 30 years old. M. Körösi says that the best marriages are those in which the husband is senior to the wife, but a woman from 30 to 35 years old will have healthier children if her husband be somewhat younger than herself. A man from 30 to 40 years old ought to take a wife from 20 to 30. If the mother be five years older than the father the vitality of the children becomes impaired.

Vaihinger on Education. — Professor Vaihinger (Halle), at the sixty-first Versammlung deutsch. Naturforscher u. Aerzte, Cöln, September 1888 (*Wiener med. Presse*, No. 42), said he agreed with the main theory of Preyer that modern physiologists and biologists have the right, and it is their duty, to announce the foundations of education, for (as Professor Löwenthal, of Berlin, had remarked already) teaching is nothing more than a foreseeing direction of natural development. He also subscribed to the fifteen theorems of Preyer, called by the latter 'physiological rules of pædagogy.' There was one point, however, in which he totally differed from Preyer—viz., as to the dead languages (which Preyer had condemned as a means of education). Preyer had forgotten the most important of the laws of development, viz., the parallelism between the ontogenetic (individual) and phylogenetic (racial) developments; in other words, that each individual must go through the historical development (Entwickelungsgeschichte) of all his race, and must traverse all forms of his ancestors. Applying this most important Darwinian law to the mind, it followed that the young man must go through all earlier grades of culture of humanity. In the life of (European) man there were these three chief cultures—the Græco-Roman, the Christian, and the modern, or scientific. This latter must form the foundations of future education, and our arrangements must be made accordingly, but Greek and Latin must not be excluded by any means. The biogenetic law, in its application to pædagogy, on the contrary, rather requires the 'classical' culture as an indispensable foundation of the modern culture.

The Coca Plant.—A recent issue of the *Kew Bulletin* contains a long article on coca, a plant which has received much attention in recent years on account of the valuable anæsthetic properties ascribed to cocaine, one of its alkaloids, while coca wine and other preparations from its leaves are also largely in use. As far back as 1580 it was described by a Spanish botanist, whose work found its way into English under the title *Joyfull newes out of the newe founde worlde, wherein is declared the virtues of hearbes, trees, oyles, plantes, and stemes.* The uses to which coca is put by the South American Indians are referred to by the author. When travelling they chew a paste made of the leaves mixed with lime, or the leaves alone, and this, he says, removes both hunger and thirst, 'and they say that they receive substance thereby, as though they did eate meate.' It was supposed until quite recently that the leaves were merely a source of stimulant to the nervous system, employed by the inhabitants of Peru and Bolivia as betel and opium are used in the East. The fact appears to be established that its use by the inhabitants of the Andean region enabled them to accomplish severe labour such as no European could perform. Travellers and scientific observers agree in ascribing to it marvellous sustaining power; it assists respiration and enables one to ascend the highest mountains without fatigue, but used in excess it produces highly injurious effects. Its true home in South America has never been clearly defined, but at present it is largely cultivated in the Andes of the Argentine Republic, Bolivia, Peru, Ecuador, and New Granada. The largest plantations are at La Paz, in Bolivia; the total production is estimated at 40,000,000 lb., valued at about £2,000,000. Almost the whole of the produce is consumed in South America. It succeeds best in the mild, but very moist, climate of the lower mountains, an elevation between 2,000 feet and 5,000 feet above the level of the sea, and the care and cultivation necessary are those suitable for the growth of tea and coffee. It is a leaf crop, and in favourable localities two or three crops may be gathered in the year; but, differing from tea, the largest and most matured leaves are sought, as they contain most of the alkaloids which render them a marketable product. The leaves, wh unbroken, are of a fine green colour, and possess a de cate, agreeable, and somewhat aromatic odour, which h been compared to the combined odour of hay and choc late. Since the discovery of its anæsthetic properties t demand for export in South America has increased; b it has been noticed that during transit to this count there is a distinct loss in the alkaloids generally, as w as in cocaine, and consequently it has become the practi to extract the alkaloids from the leaves in South Ameri and export a crude preparation, which is largely taken u by manufacturers of cocaine. The production in Sou America is so enormous that, without further extension the cultivation, one-eightieth part of it would be sufficie to swamp the cocaine markets of the world.

Anthropological Institute.—Mr. Francis Galton, in his annual address to this institute, explained how he had already been able to utilise the various measures made during the past year at his anthropometric laboratory. They had afforded material for determining the peculiar way in which variations in the different limbs of the same person, in the dimensions of his head, and in his stature, were related together. He had found that their reciprocal relations, or correlations, admitted of precise definition. Correlation was by no means confined to measures of living beings, but occurred between any two objects whose variations were in part the result of the same causes. The relation between the lengths of the different limbs in the same person was only one special case of a general law, and that of the resemblance between kinsmen was another. He had worked out in much detail the conditions of family likeness in stature, and had since found that by doing so he had at the same time quite unconsciously worked out the problem of correlation generally. The *rationale* and properties of correlation are very distinct and interesting, but they cannot be briefly and adequately described except in the technical and unfamiliar language of the law of frequency of error. He regretted much that anthropologists were, as a rule, little versed in the use of that law, because they were thereby precluded from attacking some of the most important problems of their science. They usually occupied themselves with bald averages, which told no more of the variety of the individuals to which they referred than the measure of the middlemost man in a class told of those at its top and bottom. He gave much evidence to show how far the law of error might be trusted to express the variety, in any given class, by means of a single datum, and he submitted a small table based upon that law, which he had found very serviceable in dealing with variety; it was especially of use, for comparing the observed variations in any given class with their theoretical distribution, to ascertain whether or no the properties of the law of error might fairly be applied to them. One application of this table would be for the purposes of a traveller among uncivilised people who might desire to ascertain the distribution of any faculty—say that of strength—among them. It was out of the question to measure the men individually, but it would not be difficult to excite their emulation as to whether or no they could perform certain definite feats of strength, as in lifting a particular weight. If the variation in the strength of the men was normal, two such test weights would suffice to solve the entire problem; but as it is not strictly so with us, and might be less so with them, three test weights would be advisable, the use of the third being to confirm or correct the results derived from the other two. All the data required would be—so many men per cent. failed to lift A, so many to lift B, so many to lift C, the weights of A, B, and C being known. The little table enables any such problem as this to be solved with great ease, so as to give the average strength of all who tried, and the proportion of them whose strengths lie between any moderate limits that we may please to name. A table that he had already published, called a 'table of percentiles,' gave abundant data for comparing calculated results by this method with observed ones. An ingenious traveller might make observations in this way on accuracy of aim with spear, arrow, boomerang, sling, gun, &c.; distance of throw; swiftness in running, galloping, &c.; stature; delicacy of hearing; keenness of eyesight, and much else. Owing to the want of familiarity of anthropologists with the processes and properties of the law of error, their results seldom included the simple and important datum known by the technical name of the 'probable error'; much less did they use it to show how far their averages of different classes revealed real and constant differences between them; or how far the observed differences might be reasonably ascribed to statistical accidents. A notable exception to this too frequent laxity was to be found in an admirable but short memoir by Dr. John Venn on anthropometry at Cambridge, published in the last number of the journal of the Institute. Mr. Galton's term of office having expired, Dr. Beddoe, F.R.S., was elected president for the ensuing year.

Pygmies.—Professor Flower, C.B., F.R.S., has recently lectured on this anthropological subject at the London Institution. He cited the various classical authors—Homer, Herodotus, Aristotle, Ctesias, Pliny, and others—to show the wide belief in the existence of exceedingly small races of men, to which the name 'pygmies' was appropriated. The spread of ethnological science and the discovery of races of exceedingly small anthropoid apes had revived the interest in the problem early in the last century, and the lead taken by M. de Quatrefages, the eminent Parisian professor of anthropology, and his ever-multiplying followers down to the present day, had gone far to prove that the two localities in which the ancient writers had localised the pygmies—namely, the interior of Africa and the southernmost regions of Asia, together with the characteristics assigned to them in classical antiquity, were more or less verified in the ascertained facts as to the small races of human beings to be found in those parts. It was, however, still a question how far these facts had been adulterated with fictions, and how to draw the line between the strictly historical and the poetical elements. Taking leave, therefore, of the legendary stories, Professor Flower devoted the remainder of the lecture to an account of our actual knowledge of the smallest races of men who really exist on the face of the earth, or, at least, who have existed under known circumstances in ancient ages. There have been races, it was maintained, and there seemed to be such now on the surface of our globe, to whom, with comparatively small inaccuracy, might be applied the name 'pygmies,' or folks no bigger than a full-grown man's forearm. The Andaman Islands in the Indian Ocean were inhabited by a race of very great interest to the scientific anthropologist. The earliest notices of these islands were contained in the accounts of Arab voyagers of the ninth century, by whom the ferocious hostility of their inhabitants to all intruders on their soil and their cannibalism were described in glowing colours. It was to this characteristic that they owed their comparative immunity from the visits of timid navigators, and the consequent obscurity of the accounts we had of them. In 1867 a colony was formed of more than 12,000 convicts from the Indian mainland, who were now settled on them. At first the natives were very shy, and it was years before friendly relations were established with them. But now, owing to the wise and humane treatment of them by the Governors of Bengal, much information had been got out of them. They did not till their ground nor keep domestic animals, but they had a rude kind of hand-made pottery, of which samples were shown by the lecturer. They made vessels for holding water out of the hollow stems of bamboos. They made also excellent fishing nets and baskets. They were good divers and swimmers, and were first-rate navigators of their canoes. The bow and arrow were their chief weapons, but they used also spears and harpoons. Metals they had none, and seemed not to know how to get fire, though they were careful to preserve it, as they seldom ate their food raw. They lived mostly on wild swine, birds, turtles, fish, wild fruits, roots, and seeds, the *larvæ* of insects, and honey. Water was their only drink. The valuable facts about them gleaned by Mr. E. M. Man referred, of course, to their condition before their contact with Europeans. But there was no trustworthy proof of their ever having been cannibals. One of the most distinctive physical features of the Andamanese was their small size. Strict measurements of a large number of the men had been made, showing the average height of the men to be 4 ft. 9 in., that of the women, 4 ft. 6 in. The skin was of a dark colour, almost black, and their hair was exceedingly closely curled or frizzly, and their hands were of the short, round type. The great interest about the Andamanese was that they were the only race left of small stature, dark hue, and frizzly hair, which seemed to have been the earliest stock of the population of a large part of Southern Asia, including India, Siam, Cochin China, and all the isles of the Indo-Malayan Archipelago—a race to which the name of Negrito had been given. Traces of these people were still found at various spots over this area, as in the Philippine Islands and the Malay Peninsula, but always holding the most mountainous and inaccessible regions, and more or less persecuted by the later immigrants, who had seized on the more fertile portions of their lands. In most cases their original characters were changed or nearly lost by a mixture with other races, but just enough was left to indicate their former existence. Passing to the African Continent, they found in the southernmost parts the well-known Bosjesmen, or Bushmen, exhibiting a very peculiar modification of the negro type. Their average height was very much the same as that of the Andamanese, and they had the same very crisply curled, short black hair, but in many other respects they were widely different. Separated from them, both geographically and in physical character, were a peculiar race of very little folk, called by Hamy, Negrillos, who are found living in scattered communities among the common, full-sized negroes nearly all across the African Continent, within a few degrees on either side of the Equator. Unless these were the real pygmies of the Greeks, our first knowledge of them was due to Andrew Battell, in his interesting and seemingly truthful description of the Loango coast, written at the end of the sixteenth century. His accounts were confirmed by Du Chaillu, Stanley, and others. To this group of people belonged the Akkas, who lived a short distance to the west of Lake Albert Nyanza, who were discovered by Schweinfurth in 1870, and were more recently investigated by Emin Pasha. These seemed to be the smallest race known, full-grown men and women being not more than 4 ft. high. This race the lecturer deemed worthy of the serious attention of future African explorers.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

The following are the questions set at the January quarterly Examinations in Edinburgh for the Triple Qualification :—

Questions in Chemistry.

All of which are to be answered.

1. How is hydrochloric acid prepared from common salt? Give the equation. State its physical and chemical properties.
2. How is caustic potash prepared? Give the equation. Mention the tests for it in solution.
3. Give the formula for ethylic alcohol. How is it prepared from cane sugar?
4. Give the formulæ for alum, blue vitriol, corrosive sublimate, saltpetre, nitrate of silver, nitrate of lead, and arsenious acid.

Questions in Elementary Anatomy.

All of which are to be answered.

1. Enumerate the sesamoid bones, and give the relations of each to the parts where they are situated.
2. Name the muscles which are inserted into the scapula, giving their points of attachment to that bone, and to other parts.
3. What characteristic marks distinguish the first metacarpal bone? With what bones does it articulate?
4. Trace the course of the popliteal artery, and name its branches.

Questions in Physiology.

All of which are to be answered.

1. Describe what is understood by a cardiac cycle.
2. Describe the movements of the glottis in phonation, deglutition, and respiration.
3. State the actions of the gastric juice on food, and describe the nervous mechanism of its secretion.
4. Describe the peripheral terminations of the nerves of taste.

Questions in Advanced Anatomy.

All of which are to be answered.

1. Give the origin, course, termination, and relations of the musculo-spiral nerve, and name its branches.
2. Describe the relations of the lungs and pleuræ to the chest wall.
3. The brain having been removed from the cranial cavity and placed with its base downwards, how would you expose its lateral ventricles and their horns?
4. Name the structures between the layers of the broad ligaments of the uterus, and give the position and connections of each structure.

Questions in Materia Medica.

All of which are to be answered.

1. What is the source of acid tartrate of potassium? Mention the preparations which contain this salt.
2. What is an oleate? Mention the oleates of the pharmacopœia.
3. State the composition of spiritus ætheris nitrosi, and its dose.

Questions in Medicine.

Four Questions, of which Three only are to be answered.

1. When the second or transverse part of the arch of the aorta is the seat of aneurism, what are the symptoms and physical signs that may be developed? How should such a case be treated?
2. Describe the causes, symptoms, physical signs, possible complications, and treatment of spasmodic asthma.
3. What is myxœdema? Give its characteristic symptoms, and explain what is known of its pathology.
4. Enumerate and describe the varieties of acne. What are its causes, and how should it be treated?

Questions in Therapeutics.

All of which are to be answered, including the Prescription.

1. In what diseases are emetics useful? Mention the form of emetic you would employ in each of such diseases.
2. Detail the line of treatment to be pursued in the management of a case of delirium tremens.
3. Mention the remedies, internal and external, which are found to be most useful in chronic articular rheumatism.

Prescription.

To be written in unabbreviated Latin, and the directions in English.

Prescribe a lotion containing sulphur for a case of acne.

Questions in Surgery,

All of which are to be answered.

1. What are the peculiarities and special dangers of a punctured fracture of the skull? How ought it to be treated?
2. What is meant by a dermoid cyst? Enumerate the situations in which such cysts occur, and suggest suitable treatment in each case.
3. Describe the pathology, clinical characters, and treatment of a carbuncle on the back of the neck of an old person. What different modes of death are met with in such cases?
4. To what cases of stricture of the urethra is external urethrotomy specially applicable? Describe the operation.

Surgical Anatomy.

One of which must be answered.

1. What is the course of the musculo-spiral nerve in relation to the humerus? When torn across in fracture of that bone, what is the effect produced on the hand and wrist?
2. Describe the anatomy of the semilunar fibro-cartilages of the knee-joint; and detail symptoms often produced as a result of tearing or displacement of one or other of them.

General Questions on Medical Jurisprudence.

Three of which are to be answered, and must include Nos. 3 *and* 4.

1. How would you distinguish a *post-mortem* gun-shot wound from one inflicted during life?

   Should death result from a gun-shot wound, what appearances would enable you to determine whether the latter was accidental, suicidal, or homicidal?
2. What is the cause of *post-mortem* lividity? In what situations does it occur? When does it make its appearance? With what other condition might it be confounded; and how might its real nature be discovered?

Toxicology.

3. In a case of poisoning by copper, what symptoms might indicate its remote effects? State the appropriate treatment.

   How might you detect the presence of copper in simple mixtures?

Public Health.

4. Discuss some of the principal requirements for a healthy dwelling-house.

Questions in Midwifery and Gynæcology.

Three of which must be answered, and the last must be one.

1. Compare the justo-minor and flat pelvis as regards—(*a*) Conformation; (*b*) mechanism of labour; (*c*) obstetrical management.
2. What is meant by—(*a*) A threatened abortion: (*b*) an inevitable abortion; (*c*) an imperfect abortion? State succinctly the management of each.
3. What is the treatment of inertia uteri—(*a*) In the second stage of labour; (*b*) Immediately post-partum?
4. What are the uses of the uterine sound—(*a*) Diagnostic; (*b*) Therapeutic.

The London Medical Recorder.

ARTICLE 1438.

CHARCOT ON SUSPENSION IN THE TREATMENT OF PROGRESSIVE LOCOMOTOR ATAXY.[*]

PROFESSOR CHARCOT recently gave a clinical lecture on vertical suspension of the body in the treatment of progressive locomotor ataxy and some other diseases of the nervous system. This novel method of treating tabes dorsalis was first initiated by Dr. Motchoukowsky, of Odessa, who published a *brochure* on the subject in 1883; but it received no attention in Western Europe till 1888, when Professor Raymond, of Paris, while on a scientific mission in Russia, was struck with the results presented to him. Dr. Ouanoff, his fellow-traveller (a pupil of the Salpêtrière clinic), showed its practical application there. In Motchoukowsky's pamphlet considerable improvement was ascribed to it in twelve tabetic persons; also in various neurasthenias, independent of tabes, in which the sexual functions were re-established by this treatment, The patient is suspended for about three minutes by a Sayre's apparatus, and the arms of the patient while suspended are raised every fifteen or twenty seconds to increase the traction on the spinal column.

Charcot's tabetic patients numbered eighteen, with 400 *séances*. Of these, four were only suspended each three times; the rest went on regularly. Of these Professor Charcot says:—'The remaining fourteen have experienced in varying degrees an improvement, which in eight has been quite remarkable.' All were pronounced tabetics. Walking is improved to begin with; the patients say they can walk better after the first suspension. This improvement at first lasts only a few hours, but after eight or ten sittings persists. After twenty or thirty sittings Romberg's sign disappears. Then vesical troubles are lessened or removed; also the lightning pains. Sexual impotence gives place to sexual desires and erections. (Experiments by Dr. Ouanoff on healthy persons have shown that this method has an exaggerating effect on virility.) The cotton-wool feeling in the feet gives way more or less to healthy sensations, and in general the whole health improves. Every patient steadily improved, with one exception, a young tabetic, aged 32, who at first improved, then fell off, then again improved somewhat. But the knee-jerks have not reappeared in any of the patients after three months' treatment, nor are the pupillary symptoms altered. As to other diseases, a young female with Friedreich's disease was greatly improved by the treatment. In two neurasthenic and impotent patients the sexual functions were re-established. But a patient with disseminated sclerosis was made worse, for after two sittings a spasmodic paraplegia appeared, which, however, gave way in three days. Further trial of this method is required before an opinion of its value can be given. The results are most encouraging so far, and at any rate perfectly harmless.

E. J. EDWARDES, M.D.

ARTICLE 1439.

GILLES DE LA TOURETTE ON THE PROCEDURE TO BE ADOPTED IN THE TREATMENT OF PROGRESSIVE LOCOMOTOR ATAXY, AND SOME OTHER DISEASES OF THE NERVOUS SYSTEM, BY SUSPENSION.[*]

AFTER the favourable report of Prof. Charcot on this treatment (*Progrès Médical*, Jan. 19, 1889) requests were daily received at the Salpêtrière for an account of its practical application. In answer to these, Dr. Gilles de la Tourette has written the article of which this is an abstract, and begins by reminding us that the treatment was first tried in 1883, by Dr. Motchoukowsky, of Odessa. The author has superintended about 800 suspensions of 40 patients. The suspension is easily effected when conducted in the proper way, but that way must be known. Sayre's apparatus is the one made use of (no corset is required), and its construction is well known. The weight of the body is borne partly by padded broad straps, beneath the chin and occiput, forming one piece, and partly by two separate shoulder straps. The rings supporting the head straps are capable of adjustment, and the fixation of the apparatus generally requires great care. The size and shape of the patient's head must be taken into account, and soft pads may be interposed, where necessary. The length of the shoulder straps is a most important consideration. If too long, the brachial plexus is compressed, and tingling and pain in the arm is set up; if too short, on the other hand, the muscles of the neck are stretched to an intolerable degree. Two or three trials have to be made before the exact disposition of each strap and ring for a particular patient is known. The operator then very quietly raises the patient from the ground, by the pulley, just far enough to prevent the extended toes from touching the floor; he is then steadied to prevent oscillation, and the operator fixes his eyes on a seconds watch to determine accurately the duration of the 'séance.' While the patient is thus suspended, he is directed to raise his arms gently from time to time; if this can be done it renders the suspension and traction more efficient. The average time of suspension is three minutes, and it ought in no case to exceed four. At first, indeed, half a minute is enough, and the time is gradually prolonged at each subsequent sitting, till, after the sixth or eighth, the period of three minutes is attained. Even here, individual susceptibilities must be taken into account, *e.g.* a heavy patient will not bear a long suspension so well as a lighter one. When the operation has been well conducted, no painful traction of the neck-muscles is felt next day. Neither pain nor even fatigue should be occasioned.

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[*] CHARCOT, PROFESSOR.—*De la Suspension dans le Taitement de l'Ataxie Locomotrice Progressive et de quelques autres Maladies du Système Nerveux.* (*Progrès Médical*, Jan. 19, 1889.)

[*] *De la Technique à suivre dans le Traitement par la Suspension de l'Ataxie Locomotrice Progressive et de quelques autres Maladies du Système Nerveux* By Dr. Gilles de la Tourette (Chef de Clinique des Maladies du Système Nerveux). (*Le Progrès Médical*, Feb. 23, 1889)

Daily 'sittings' are harmful; every other day is quite often enough. The patient must be let down with extreme gentleness, and not by a succession of shocks. He should be supported while being relieved of the apparatus, and should afterwards rest a short time in an arm-chair placed ready. The patient's costume is not important. He should take off his coat before the suspension, and his neck should be bare, or at any rate not compressed. The traction by the operator should of course be made from the upper pulley, not the lower, if the portable tripod suspension apparatus is used. But this tripod is not the best arrangement here, though very convenient in applying a plaster-jacket; for the patients may grasp one or other leg of the tripod with convulsive force when they find themselves off the ground, and may even overturn the apparatus. As to the duration of the treatment, this is a point not yet settled. Patients who began it four months ago at the Salpêtrière are still attending there for it, and appear to improve steadily (*et semblent s'améliorer d'une façon progressive*). In any case, as Professor Charcot says, the treatment may be boldly tried with perfect confidence as to its harmlessness when the proper procedure is adopted.

E. J. EDWARDES, M.D.

ARTICLE 1440.

SEMMOLA ON THE CURABILITY OF INTERSTITIAL HEPATITIS.

IN a lecture on therapeutics at the University of Naples (*Il Progresso Medico*, Jan. 15, 1889) Professor Semmola exclaims strongly against the exaggerated importance which is attached to the anatomical basis of disease. He points out that the common error of associating the morbid anatomy found *post mortem* in the last, and probably incurable, stage of disease with the symptoms of an earlier, and possibly curable, stage, as met with at the bedside, discourages therapeutic efforts, and leads directly to pessimist views.

So, in speaking of the curability of interstitial hepatitis, he does not refer to the atrophic stage, which is the one most commonly met with in the *post mortem* room, and which is, as it were, the dregs of the disease; but to an earlier condition, when the liver is large, and the new tissue has not yet become hard, contracted, and fibrous.

Professor Semmola suggested the possibility of the curability of interstitial hepatitis in a lecture so far back as 1869. And at the International Medical Congress at Amsterdam in 1879 he details a series of cases in support of that view. More recently Dr. Millard has advocated the same proposition in the *Progrès Médical*, and has published a series of cases in which he considers that interstitial hepatitis has been cured.

Professor Semmola in his present lecture relates several further cases, but he appears to make no distinction between those of malarial origin and those due to syphilis or alcohol. It is quite possible that the former may be more readily curable than either of the latter.

It would also appear that sufficient account is not given to the establishment of a collateral circulation in the very numerous ways in which it is known to occur, and to the consequent disappearance of ascites and other symptoms, the interstitial hepatitis remaining unaltered. The reporter well remembers a middle-aged man who was tapped two or three times for very copious ascites, and whose liver was so hard and irregular that several of those who saw him thought he had malignant disease, but who lost his ascites completely and recovered sufficiently to resume his work as a railway navvy. It was difficult to attribute the result to anything but the establishment of a collateral circulation.

The principle of Professor Semmola's treatment is the rigid restriction to a milk diet. He argues that a more solid dietary, and especially meat, increases the hepatic irritation, and exaggerates the disease.

H. HANDFORD, M.D.

ARTICLE 1441.

CANTANI ON THE TREATMENT OF CHOLERA.[*]

PROFESSOR CANTANI, whose experience during the late epidemic at Naples was considerable, communicated a paper on this subject to the *Verein für innere Medizin* in their VIIth Congress held at Wiesbaden. The indications for treatment which result from recent researches as to the nature of the disease are three: 1. to diminish the multiplication of the bacilli in the intestinal canal. 2. To render innocuous the chemical cholera virus in the intestinal canal, and to eliminate rapidly from the blood the virus already absorbed. 3. To obviate the thickening of the blood by the introduction of water. The first indication is only useful in the initial period of the infection. To diminish the activity of the bacilli, or to kill them, two methods are employed; their alimentary substratum is rendered unfavourable, or they may be attacked directly by specific disinfectants. Therefore, seeing that acids are unfavourable to the vegetation of the bacilli, the contents of the stomach and bowel are acidified by the employment of lactic or hydrochloric acid. This plan has certainly been of some use in the early stage of the disease. As direct disinfectants, specifics to kill the comma-bacillus, carbolic acid, thymol, menthol, and boric acid have been given. Cantani, however, is convinced that cholera can only be successfully combated by attacking directly the comma-bacillus, and this is not possible by the ordinary way of the mouth and stomach, either because owing to the irritability of the stomach the remedies increase the vomiting, and are therefore quickly rejected, or because they cannot be introduced in sufficient quantity into the stomach; by the time, too, they reach the intestine, they may be so altered in quality as to be practically inert. He therefore came to the conclusion that the best method of applying disinfectants was by the rectum, by enteroclysis, or large intestinal irrigation. He employs a hot solution of tannic acid (38° to 40° C.). Heat is very necessary to the patient to prevent the onset of the algid condition, and this 'internal hot bath' acts more certainly than the ordinary hot bath. The ordinary dose of tannic acid was from 5 to 20 grammes in ½ to 2 litres of hot water or infusion of camomile. Twenty or thirty drops of laudanum were also generally added. The good effect of this treatment was very remarkable, and is corroborated by other observers. The favourable results obtained induced Cantani to commission Drs. Manfredi and Di Simone with the task of examining the influence of the hot tannic solution on the growth of comma-bacillus. Their experiments showed that tannic acid in solution of 1 per cent. at a temperature of 37° C. killed completely the comma-bacillus in a cultivation of beef-tea after one hour and a half. Even with a solution of ½ per cent., after six hours' exposure, the bacillus was either killed or its vegetative activity much attenuated. The tannic enteroclysis, however, does not affect the bacilli which have penetrated into the submucous tissue of the bowel; therefore it ought to be employed as early in the disease as possible.

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[*] *Gazzetta degli Ospitali*, No. 1, 1889.

Passing to the second indication, to render innocuous the chemical cholera-virus in the intestinal canal, and to eliminate rapidly the virus already absorbed into the blood, he says it is no longer doubtful that cholera kills not solely by thickening the blood (which indeed in many cases is not seen), but chiefly by a chemical virus, a ptomaïne. In every epidemic cases are observed in which, without notable loss of water, the patient falls into rapid collapse, becomes cold, cyanotic, and dies. In spite of some assertions to explain even these cases of fulminating, dry cholera by thickening of the blood, due to exudation of much water with its accumulation in the bowel from intestinal paralysis, many cases undoubtedly occur in which the algid stage and asphyxia supervene before much water is lost and without there being any thickening of the blood. It is natural, therefore, to suppose that in grave cholera, in addition to the vegetation of the bacilli in the intestinal canal and their microbiological influence on the bowel mucous membrane, a true chemical cholera-poisoning takes place. Cantani, in support of this fact, here refers to certain experiments on dogs, which show that a chemical cholera-poison exists, standing in relation to and produced by the bacilli, and which in its action is independent of the vegetative activity of the cholera-bacilli fixed and living in the intestinal canal, although it must be considered as the effect of the same. The author is unwilling to enter into the question, whether the cholera-poison is a ptomaïne produced by the bacilli of the contents of the bowel and of the intestinal walls, or whether it is a secretion of living cholera-bacilli, or finally, and this he is inclined to conclude from his researches, ; whether it is not rather a poison chemically specific, belonging to the cholera-bacilli themselves, like poisonous fungi, and which, after their death and dissolution, reaches the blood by intestinal absorption. From the therapeutic point of view it is to be noted that the cholera-poisoning can only be met by rendering the poison innocuous, and by promoting its rapid elimination from the blood. No antidote is yet known, but the surprising results obtained by hot tannic enteroclysis justify the supposition that tannic acid diminishes the deleterious action of the cholera-poison, in a manner analogous to its action with various other alkaloids, and perhaps transforms it into an insoluble, or at least less soluble tannate; and hence not at all, or less, absorbable and active. To clear up this point Cantani injected cultivations of comma-bacillus into the peritoneum of a series of dogs; in half he added 0·6 per cent. of tannic acid. These presented no symptoms of cholera-poisoning, while the others did. The third indication that is to diminish the thickening of the blood, and therefore to maintain the circulation, and thus favour the elimination of the poison through the kidneys, can only be met by introducing water into the thickened blood. After referring to injections into the veins, transfusion, &c., he says that since 1865 he has practised large injections of salt water under the skin; in the epidemic of 1884 this method was largely used. He found that subcutaneous injection, or hypodermoclisis (as he prefers to call it), of sterilised water at a temperature of 38° to 40° C., containing 4 per 1,000 of sodium chloride and 3 per 1,000 of carbonate of soda, in quantities of a litre more or less, was absorbed in all cases with the greatest facility, often with surprising rapidity, and ordinarily without the aid of massage. In all cases, and often even in moribund patients, the hypodermoclisis produced at least transitory improvement; it never did harm, and often the patients recovered. Of 187 severe cases 114 recovered and 73 died. The hypodermoclisis should be commenced with the first appearance of choleraic diarrhœa, and continued *pari passu* with it. The regions of the body recommended as suitable for its employment are the lumbar-abdominal, inguinal, interscapular, and gluteal.

G. D'ARCY ADAMS, M.D.

ARTICLE 1442.

BRUCE ON ABSENCE OF THE CORPUS CALLOSUM.*

DR. BRUCE'S paper, which is reprinted from the *Proceedings of the Royal Society of Edinburgh*, contains a very valuable and interesting account of the rare condition of absence of the corpus callosum. The case which he describes was that of a man who throughout his life had not presented any noteworthy abnormal mental symptoms. The corpus callosum was entirely absent, as was the psalterium of the fornix. The outer surface of the brain showed a reduction in size of the frontal lobe, with an increase of the occipital, and to a less extent of the temporal. The fissure of Rolando, instead of passing downwards and forwards, passed downwards and slightly backwards; it also reached the median surface of the hemisphere, where it extended as a deep fissure as far as the free margin of the grey matter of the gyrus fornicatus. On the median surface the calloso-marginal fissure could not be traced. The parieto-occipital and calcarine fissures, both of which were well marked, did not join each other, but each passed separately into the fissura hippocampi. The parieto-occipital fissure was unusually far forward, so that on its mesial aspect also the occipital lobe was more than ordinarily large.

After giving an account of the various recorded cases the author proceeds to inquire into their causation, which he believes may be ascribed to arrest of development. This may occur at various times with different results as follow :—

1. *The falx may constrict the anterior cerebral vesicle insufficiently or not at all.*—Lesion occurs during the first three weeks. The cerebrum will consist of a single vesicle, or of two imperfectly divided hemispheres, united by an unthinned septum (or grey matter). There will be one ventricular chamber, no tela choroidea superior, no convolution

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* Bruce, Alex., M.D., F.R.S.E., on a Case of Absence of Corpus Callosum in the Human Brain. *Reports from the Laboratory of the Royal College of Physicians, Edinburgh*, 1889.

of the marginal arch, and therefore no fornix, no anterior commissure, and no corpus callosum.

2. *The two hemispheres perfectly divided, but Septum Lucidum and Marginal Arch, if developed, fail to unite.*—There will be no anterior commissure, no corpus callosum, no psalterium of fornix. Tela choroidea superior continuous with falx cerebri. Fornix present if marginal arch developed. Development arrested before the fourth month.

3. *Hemispheres formed, but Septa Lucida united only by Antero-Inferior Angle.*—Anterior commissure present. Other structures as in 2. Development arrested during fourth month.

4. *Hemispheres formed; fusion of Septa Lucida and Marginal Arches more extensive, but still incomplete.*—(*a*) Fusion limited to septa lucida. Arrest of development at end of fourth month. Anterior commissure and knee of corpus callosum present. Fornix present, but its psalterium absent. (*b*) Union of septa lucida complete, but in marginal arches limited more or less to anterior part. Corpus callosum present anteriorly, but generally thin (as in lower mammalia). Splenium absent or thin. Psalterium of fornix present, if fusion has extended sufficiently far back.

The causes assigned by the author for this arrest of growth are as follow:—1. Connected with the primitive falx cerebri—(*a*) its non-development during the first three weeks of life; (*b*) after its formation its excessive resistance to atrophy, such as might result from intra-uterine leptomeningitis; (*c*) a permanently too deep position of the falx, such as might result from cranial deformity. Richter considers that premature ossification of the basis cranii increases the angle between the two petrous temporal bones, and, by thus stretching the tentorium cerebelli, so depresses the free border of the falx that it divides the corpus callosum as it grows up against it. 2. Irregular distribution of the anterior cerebral arteries (Sander) passing between the septa lucida and preventing their union. 3. Asymmetry of the hemispheres (resulting from asymmetry of cranium), so that the two septa lucida are not opposite each other. 4. Abnormal growths in the falx. 5. Nutritional disturbances in septa lucida, such as early hydrocephalus.

Dropsy of the fifth ventricle, lesions in callosal arteries or in vessels of the centrum ovale and hydatids, are mentioned as secondary causes.

This case is obviously of much interest in connection with Professor Hamilton's views [LONDON MEDICAL RECORDER, Nov. 20, 1888], which are thus criticised by the author. The view of Professor Hamilton with regard to the distribution of the callosal fibres seems to be completely negatived by the appearance in my case and in those recorded by Onufrowicz and Kaufmann. It is obvious that if, in the normal brain, the corpus callosum is the main constituent of the internal capsule, the latter structure should almost disappear when the corpus callosum is absent. This, however, does not occur. Hamilton endeavours to explain this by the theory that the corpus callosum is present, but does not decussate—that it ascends to the cortex of the same hemisphere. Were that so, the normal appearance of the tapetum should be present in the occipital lobe; but it is unquestionably absent in the author's case. The author thinks that Hamilton has been misled by the intermingling of the callosal and capsular systems. As showing the separateness of these two systems the author notes that in the mature human fœtus and infant up to three months the callosal system is non-medullated; while in the mature fœtus the whole posterior limb, and in the three months' child almost the whole of both limbs of the internal capsule are medullated.

As bearing on the function of the corpus callosum the author alludes to the prevalent idea that its absence causes idiocy. An examination of the literature, however, he states, shows that where there has been imbecility there has always been some other grave brain defect. On the other hand, the cases of Eichler, Paget, Malinverni, Jolly, with his own, and the second case of Kaufmann and that of Erb, show that, where the brain is otherwise well developed, there may be no disturbance of mobility, co-ordination, general or special sensibility, reflexes, speech, or intelligence, whether the defect of the corpus callosum be primary or secondary.

[We should note that this most interesting paper is copiously and admirably illustrated.—*Rep.*]

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1443.

KNAPP ON THE OPERATIVE TREATMENT OF IRREDUCIBLE DISLOCATION AT THE SHOULDER.

AN interesting report on the relative merits of arthrotomy and resection of the head of the humerus in cases of irreducible dislocation at the shoulder has been recently published by Dr. Otto Knapp, of Stuttgart (*Beiträge zur klinische Chirurgie aus den Kliniken zu Tübingen, Heidelberg, Zurich, und Basel*, Band iv., Heft 2, 1889). As a rule, it is stated, it is in old cases that dislocation at the shoulder is found to be irreducible, since in cases in which the lesion is recent the administration of an anæsthetic and the use of one or more of the improved methods of reduction usually enable the surgeon to overcome any obstruction to the return of the head of the humerus. In recent dislocation the obstruction is most frequently caused by a detached piece of the margin of the glenoid cavity or by the broken-off and displaced external tuberosity. In old cases the hindrance to reduction is due to one or more of several causes. The displaced tuberosity may have contracted adhesions to the glenoid articular surface; the capsule may be shrunken and distorted in consequence of cicatricial retraction; the long head of the biceps may have been displaced; portions of the biceps and coraco-brachialis may intervene between the head of the humerus and the glenoid cavity, and there may be considerable contraction of the pectoral muscles. The most frequent causes, however, of obstinate irreducibility are the abundant formation of fibrous tissue in and about the glenoid cavity, producing more or less ankylosis, and an irregular outgrowing of new bone around the neck of the humerus and the margin of the glenoid cavity. The morbid conditions found in any old case do not depend so much on the age of the dislocation as on individual peculiarities and on the nature of the injury and its complications. For this reason it is impossible to fix any limit of time beyond which it might be considered quite hopeless to attempt reduction. In many cases reduction cannot be effected after intervals of a few weeks, and, on the other hand, instances have been recorded of successful reduction after intervals of eight months, ten months, and two years. Bostock has recorded a case in which, in the course of fifteen minutes, he succeeded in reducing a subclavicular dislocation of eight years' standing. These instances, however, are very exceptional, and Hamilton is doubtless quite correct in his surmise that if the truth were known it would probably be found that the number of failures after the sixth or eighth week has been greater than the successes. Attempts to reduce an old dislocation by bloodless methods, even when relatively slight force is exerted, are not always free from risk. The neck or shaft of the humerus, especially in old subjects, may be fractured, and Körte of Berlin has collected seventeen cases in which, during such attempts, the axillary artery or vein was ruptured. Attempts to establish some mobility of the unreduced head of the humerus by passive movements, and prolonged extension of the limb demand much care and perseverance on the part both of surgeon and patient, and are very uncertain in their results. The following methods of operative treatment have been practised in cases of old unreduced dislocation at the shoulder; subcutaneous section of the contracted and constricting soft parts; subcutaneous osteotomy of the neck of the humerus; arthrotomy and subsequent attempt to replace the head of this bone (blutige Reposition), and resection of the head of the humerus. The first two methods, though they have certainly been followed by good results in some few cases, cannot, according to Dr. Knapp, be recommended. In the third method the surgeon is able to expose to sight the cause of the obstruction to reduction, and, in most instances, to remove this more readily and effectively than by forcible reduction or subcutaneous division. The results, however, of this operation have not hitherto been very satisfactory. Dr. Knapp has collected ten cases in which the operation was performed, and added to these two original reports of cases recently treated in this manner by Professor Bruns of Tübingen. In two of these twelve cases the treatment resulted in death, in three it was found necessary by subsequent operation to remove the head of the humerus, and in four only was there any definite record of improvement in the function of the limb. The risks of resection of the head of the humerus, which led Malgaigne and Roser to protest against the performance of this operation in cases of unreduced fracture, have been much diminished since the introduction of the antiseptic method. Dr. Knapp has collected twenty instances of this treatment, including three in which the operation was performed in this country by Adams, Shield, and Howard Marsh. This record also seems to be an unsatisfactory one, as death followed the operation in four cases, and reports of the results of the treatment are wanting in six cases. Dr. Knapp, however, prefers it, on the whole, to arthrotomy, and states that in some respects its results are decidedly superior. Arthrotomy, he allows, would seem at first right to be the most rational, and, under antiseptic conditions, the safest method of dealing with old unreduced dislocation, but, it is asserted, this expectation has not been fulfilled. It is certainly indicated in the rare instances of irreducible recent dislocation, and also in cases of dislocation of some few weeks' standing; but where consecutive changes in the bones and soft parts have occurred to any considerable extent, it is almost useless to expect from it any good result. The pathological conditions in the latter class of cases, such, for instance, as muscular atrophy, cicatricial formations and adhesions, osteophytic outgrowths, and deposits of callus, all tend strongly to favour ankylosis and to prevent movement. The chief objection to arthrotomy, however, is the necessity in most instances of isolating the head and neck of the humerus to a considerable extent, and so of causing necrosis and prolonged suppuration. Dr. Knapp regards resection of the head of the humerus as a much more suitable operation in such cases, as it permits of a more ready discharge of wound-secretion, is not so liable to result in ankylosis, as the surfaces of bone which come in contact are much reduced, and is less likely to be affected in its results by the passive tension of the cicatrised soft parts.

W. JOHNSON SMITH.

ARTICLE 1444.

SCHUCHARDT ON TUBERCULAR FISTULA OF THE ANUS.*

STUDY of the history of these cases shows that the old observers had noticed how often fistula was connected with consumption of the lungs; but it was reserved to the present day to clear up many things not understood as to their relationship, and to prove that the majority of fistulæ in ano are due to local tuberculosis. To Professor Volkmann belongs the credit of having first shown the tubercular nature of these fistulæ, and in the Klinik at Halle in all these cases the presence of tubercle-bacilli is shown by microscopical examination or by inoculation into the anterior eye chambers of rabbits. Very interesting and demonstrative of the specific character of the disease is the well-known case of Volkmann, in which the secretion from the fistula infected the skin of the anus, giving rise to a *lupus foliativus* (and at the same time an additional proof that lupus is a tuberculosis of the skin). In this case the inguinal glands also became tubercular. One must, from analogy of cancer of the rectum, which only leads to infection of the inguinal glands by encroachment of the carcinoma on the skin of the anus, assume that the secondary lupus has occasioned the tubercular bubo. As to the pathogenesis of tubercular fistulæ, very small lesions of the mucous membrane afford the point of entrance to the tubercular virus, and it is characteristic that these small lesions of the gut must be present so that the virus imported in food or in the swallowed saliva may find its way into the loose periproctal connective tissue. Large ulcerations, such as also occur in intestinal tuberculosis in the rectum, only very seldom give rise to tubercular peri-proctitis. Only in isolated cases, in which no opening in the mucous membrane can be found, is a primary connective-tissue tuberculosis to be thought of. The rectum, like the cæcum and vermiform appendix, is very liable to acute inflammation and to chronic ulceration from stagnation, &c., of the bowel contents, and, to complete the analogy, one sees perityphlitic fistulæ, which likewise have the character of tubercular abscesses. Coming to the treatment of tubercular rectal fistulæ, the propriety of their operative removal has long been proved. The old idea that the fistula represented a beneficial, natural, derivative action, which hindered the development of the lung disease, and that the cure of the fistula caused the development of the phthisis, was proved false when etiological investigation showed that both diseases were due to a common cause. We have long recognised the necessity of removing a local tuberculosis wherever it is possible, and the rule holds good in these cases. The disease must be removed as radically as possible, by incision and clearing out of all the recesses of the often tortuous and far-spreading fistulous canal. Whether the treatment recommended by American surgeons of diminution of the wound by sutures or the ordinarily employed iodoform plugging of the wound is to be preferred, Schuchardt thinks questionable. The last affords greater security against relapses. As for the rest, he adds, that after radical removal of all diseased tissue, exact suture makes healing by first intention possible, and that, certainly, for simple non-tubercular fistula, the new method certainly deserves the preference.

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* *Volkm. Sammlg. klin. Vortr.*, No. 296; and *Deutsche med. Zeitung*, No. 86, 1888.

G. D'ARCY ADAMS, M.D.

ARTICLE 1445.

RÜGER ON INFANT FEEDING.*

DR. C. RÜGER, in *Gesundheit*, No. 11, 12, 1888, treats very fully of the various substitutes for mother's milk. Referring to the choice of a wet nurse, he gives as the result of numerous original analyses that the milk of placid and otherwise healthy women with copious secretion is richest in the solids, not fat, while that of women of greater activity and vivacity is, though less abundant, richer in fat.

Treating next of cow's milk, he rightly insists on the fact that the essential difference between its composition and that of human milk, consists not so much in the relative proportions of the casein, sugar, and fat, as in the character of the casein itself, which, in the latter, forms in the stomach a soft, loose flocculent coagulum, but in the former a solid, dense mass of the consistence of cream cheese, and consequently far less digestible. [In this respect mares' and asses' milk resembles human milk, though their large amount of salts gives them, especially that of the mare, an aperient action, while the milk of other ruminants, as the goat and sheep, resembles that of the cow. We have seen convulsions in an infant fed on cow's milk, followed by the ejection from the stomach of a mass of curd resembling a small sausage in size and form, and the advantage of diluting it with barley water, or, in the case of older children, of giving it with bread or biscuit, consists in the breaking up of the mass of curd and exposing a larger surface to the action of the gastric juice.—*Rep.*] He exposes the fallacy of the popular preference for 'milk from one cow,' a course which involves the maximum of variability, whereas, when the milk of some score of cows is mixed the product is as nearly uniform as possible. [This probability of variation becomes a certainty when the milk is drawn direct 'into your own jugs,' for, as every cowkeeper knows, though the public do not, the first draught or 'fore-milk' is as poor as if skimmed, while the last or 'strippings' is so rich in fats that it is sometimes sold as cream.—*Rep.*] He very properly condemns all so-called 'foods,' *i.e.* farinaceous substitutes for milk, since starch as such is not converted into sugar in the infant's alimentary canal; but he considers Nestlé's milk food, so widely advertised and praised, as one of the worst of these preparations. In this condemnation he is supported by Kehrer, Henoch, Escherich, Biedert, Wolf, and the great authority on all that belongs to children, Ad. Baginsky. [He does not mention Mellin's food, in which the conversion of the starch into soluble saccharine matters is complete, and which, added to diluted milk, is a most valuable food.—*Rep.*] But he gives the first place to those of Löfflund and Liebe and the *Rahmgemenge* of Dr. Biedert. [We can fully confirm his high opinion of Löfflund's cream milk, but have not any acquaintance with Liebe's.—*Rep.*] In Biedert's, he says, the proportion between the nitrogenous and non-nitrogenous constituents most nearly approximates to that in human milk. [Whatever objections may be urged against the sweetened condensed milks, and the excess of sugar is one, we have found that, for reasons which we do not clearly see, the coagulum is less dense than that of fresh cow's milk, and especially in the first months of infancy prefer it to the ordinary milk. We may, too, observe that the Anglo-Swiss 'milkmaid brand' has constantly given us greater satisfaction than Nestlé's.—*Rep.*]

E. F. WILLOUGHBY, M.B.

ARTICLE 1446.

EHRLICH ON EMBOLISM OF RENAL ARTERIES AS A CAUSE OF PUERPERAL ECLAMPSIA.

IN the *Meditzinskoiĕ Obozreniĕ*, No. 21, 1888, p. 827, Dr. N. S. Ehrlich, house-physician to the Odessa Town Hospital, publishes a noteworthy paper on the pathology and etiology of eclampsia. He adduces four successive fatal cases in young, strong women with an abundant subcutaneous cellular tissue, three of them being primiparæ, one multipara. All the cases were complicated with puerperal affections (pelvic suppuration, &c.). The daily amount of the urine was exceedingly scanty, in one case an almost complete anuria (of about fourteen days' standing) being present. The urine was always highly albuminous, and contained casts and epithelial cells. At the necropsy the kidneys were invariably found to be enlarged, turgescent, anæmic, their cortical substance opaque, while the cerebral meninges were anæmic and œdematous. In two of the cases a microscopic examination was made, which revealed (*a*) an extensive fatty degeneration of the epithelium of the cortical convoluted tubules, their lumina being plugged up with casts consisting of epithelial cells undergoing fatty, and occasionally hyaline, degeneration; (*b*) thrombosis of almost all large and small cortical arteries, and of glomerular afferent vessels; (*c*) a moderate dilatation and congestion of pyramidal veins. The thrombi were pale, and consisted, some mainly of conglomerates of pus-corpuscles and leucocytes, some of leucocytes and granular detritus, all containing fatty drops and grains. The presence of fat was demonstrated (by means of osmic acid) not only in the larger thrombi and contents of the convoluted canaliculi, but also in the glomerular capillaries and in the *rete mirabile*. No micro-organisms were found. On the ground of his cases as well as of the study of the literature of eclampsia, Dr. Ehrlich deduces the following inferences:

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* *Die Ernährung des Säuglings.*

1. A considerable majority of the authorities on the subject are inclined to regard eclampsia as a result of renal disease in pregnant or parturient women.

2. The theories in vogue, however, which attempt to explain the pathogenesis of renal affections in pregnant women are too hypothetical, and altogether not sufficiently plausible. [Such are Gusserow's, Bamberger's, and Moericke's theory, which ascribes the renal lesion to a dilated state of the abdominal veins; Halbertsma's and Flaïschlen's hypothesis, attributing the disease to compression of the ureters; Leyden's supposition that an essential *rôle* belongs to an increased intra-abdominal pressure leading to renal anæmia; Schroeder's teaching on renal anæmia as a result of a spasmodic contraction of arteries, &c.]

3. The most natural and simplest theory which best explains at least a vast majority of cases of *intra-partum* and *post-partum* eclampsia, and, at the same time, finds the best support in anatomical facts, is constituted by Ehrlich's hypothesis attributing the symptoms to embolism of the renal blood-vessels. 'A vessel having been blocked up by a thrombus, the whole region of the kidney supplied with the vessel necessarily comes out of gear and work. The arrest of nutrition naturally must lead to a complete cessation of functions of the epithelium of the convoluted tubes. The excretion of constituents of the urine ceases. And, when their accumulation in the woman's blood reaches a certain high level, an eclamptic fit follows.'

4. The starting-point for the thrombosis, and, consequently, for eclampsia itself, is given by some puerperal lesion with its sequels; in other words, 'by some contusion or laceration of the genital cellular tissue and its vessels; particles of fat from the tissue or pus, in the state of fatty degeneration, from some suppurating cavity may enter into the ruptured vessels to be carried on by the blood-current into the capillaries of the brain, lungs, and, before all, of the kidneys, those filters removing everything extraneous from the blood.' That fatty embolism represents a very common occurrence, has been long ago pointed out by Professor Recklinghausen, who found the plugging of the renal (as well as of cerebral and pulmonary) vessels in cases of bone fractures. Many other authors (Zenker, Wagner, Busch, Joessel, Mulot, Feltz, Bergmann, Luecke, Klebs, Czerny, Schweininger, Riedel, Flournoy, Scriba, Jolly, Ehrlich, &c.) met with the morbid phenomenon in similar cases, as well as in those of osteomalacia, contusions of subcutaneous cellular tissue, rupture of the stomach, &c.

5. Anuria, as often present in eclampsia, represents a direct result of the embolism.

6. Cases of recovery from eclampsia may be explained by a spontaneous expulsion of the emboli with a consecutive restoration of the renal functions.

7. To verify the theory, it would be important to examine in each case not only the renal, pulmonary, and cerebral capillaries, but also the vessels of the genital system. [And also to examine the patient's urine, microscopically and chemically, in cases of recovery, in order to make out whether there is really any fat or not. At all events, the embolic theory leaves unexplained such cases where eclampsia makes its appearance during pregnancy—that is, in the absence of any puerperal lesions as thought of by Dr. Ehrlich.—*Rep.*] V. Idelson, M.D.

Article 1447.

POLÜBINSKY ON THE USE OF GLYCERINE ENEMATA AND SUPPOSITORIES.

In the *Vratch*, Nos. 1, 3, and 4, 1889, p. 1, Dr. Alexandr S. Polübinsky, of St. Petersburg, publishes an ably-written and very instructive paper on the treatment of constipation of various forms by means of glycerine, administered in the shape of either enemata or suppositories. The paper is based on fifty cases from Professor V. A. Manasseïn's clinic, of which in forty glycerine enemata and in ten Boas' suppositories were employed. As regards the quantity of glycerine used for an enema, in one case 1 gramme was injected; in nineteen cases, 2 grammes; in thirteen, 3; and in seven, 4. The suppositories contained invariably 2 grammes of the drug, the constituent being either gelatine or cacao butter. Forty-five patients were men, aged from 12 to 55, and five women of from 10 to 40. The following brief summary deserves to be placed before our readers.

A. *Results of Clinical Experiments.*—1. In 23 cases (46 per cent.) the administration of glycerine was followed by abundant motions; in 19 (38 per cent.), by scanty stools; and in 8 (16 per cent.), no action of the bowels took place. 2. The first group includes: *a*, such cases where the presence of fæcal masses in the S. Romanum could be ascertained both by palpation and percussion: and *b*, such ones where the fæcal accumulation could be elicited only by percussion. In the former subdivision the stools passed were solid and normally shaped; in the other they were rather loose (gruel-like). The first 'call' was felt by the patient usually in one or two minutes to gradually increase in its intensity, and to be followed by a motion in three, four, or five minutes. The action was not attended or followed by any unpleasant sensations, except one case, where a rather vivid local burning was experienced by the patient for about 15 minutes. A controlling enema, made of 2½ or 3 tumblerfuls of water, and administered after defæcation, gave negative results (that is, the water returned unchanged) in 19 cases, while in 4 the fluid was found to be intensely stained with fæcal matter. In one of the former 19 cases, however, a subsequent administration of castor-oil (ʒj.) was followed by a rather abundant stool. 3. The second group includes: *a*, such cases (6) where an ordinary enema, administered subsequently, did not bring about any action of the intestines; palpation detected fæcal accumulation only in the sigmoid bowel, the cæcum being empty; *b*, such cases (9) where a glycerine enema produced only scanty stools, but a subsequent ordinary enema was followed by a free discharge; the examination proved that both the sigmoid bowel and cæcum (in other words, the whole large bowel) contained solid or loose fæcal masses; *c*, such cases (4) where an after-glycerine aqueous enema remained inactive, but a dose of castor-oil caused abundant motions. The examination gave the same results as in the preceding subdivision, the cases concerning constipation of 2 or 3 days' standing. 4. The third group refers to such cases where glycerine gave rise solely to fleeting 'calls,' but otherwise remained quite inert, stools following a subsequent administration of ordinary enemata or castor-oil. 5. In the shape of suppositories, glycerine acts somewhat more slowly than when injected into the rectum, stools taking place in 10, 15, or 18 minutes, which depends simply upon the circumstance that gelatine or cacao butter require a certain time for their liquefaction. 6. The 'calls' induced by glycerine are short-lasting, and when the patient postpones or inhibits his defæcation beyond the time indicated above, it may sometimes happen that no stool takes place at all.

B. *Theory of the Action of Glycerine.*—1. The eccoprotic action of the drug cannot possibly be attributed to anything like its softening or liquefying fæcal masses, since (*a*) water, milk, olive-oil, and other fluids, when injected into the rectum in similarly small quantities (6 grammes or so), fail to excite any motions; (*b*) when injected in such trifling doses, glycerine is rapidly absorbed by the mucous membrane; (*c*) stools occurring after glycerine enemata are usually solid and sausage-shaped—that is, show no signs of liquefaction; (*d*) neither are the masses covered with any watery or slimy layer; (*e*) stools take place within a short time after the administration of glycerine, while the liquefaction process should necessarily require a comparatively long interval. 2. Glycerine undoubtedly causes a local irritation (probably congestion) of the rectal mucous membrane, since (*a*) all patients experience a sensation of warmth or some burning in the rectum; (*b*) there is observed a slight rise of the rectal temperature after the enemata; and (*c*) on a digital exploration during 'calls' there are detected fairly strong contractions in the upper portion of the rectum. The drug, however, does not increase the secretion of the rectal mucous membrane. 3. The irritation lasts until a complete absorption of glycerine. Possessing a great absorbability, the substance very rapidly penetrates into the (very rich) lymphatic vessels of the rectum, and, having disappeared from the latter, ceases to act. Hence it is unable to establish any considerable peristaltic action of the bowel lying higher up from the sigmoid intestine.

C. *General Conclusions.*—1. Best results are obtained from glycerine in cases of fæcal accumulation in the rectum and S. Romanum. 2. In cases of fæcal stagnation occurring higher up (typhlitis, general intestinal catarrh, &c.) the drug is altogether useless. 3. Glycerine enemata or suppositories are indicated especially (*a*) as a means for 'training' the rectum—that is, for exciting regular rectal 'calls'—in cases of habitual constipations; (*b*) in cases of constipation caused by fæcal accumulation in the large bowel, and depending upon atonic state of the intestinal muscular coat, as occurring most commonly in women after parturition. Since intestinal atony in such patients is usually accompanied by a similar state of the abdominal press, a systematic employment of glycerine enemata must be obviously supplemented by daily abdominal gymnastics and massage, faradisation of the abdominal muscles, and intra-rectal galvanisation; (*c*) in such cases where the rectum and sigmoid bowel are mechanically compressed by pelvic tumours (including early pregnancy); (*d*) in retroversion of the uterus associated with pressure on the rectum; (*e*) in children suffering from scrofula of a torpid variety; (*f*) in such persons who experience difficulty and pain on defæcation because of their fæces being very hard, and who accordingly often abstain from stools. Here glycerine proves useful mainly as a local lubricant. 4. On the whole, glycerine enemata should be preferred to suppositories, since the latter (*a*) are more expensive; (*b*) their use is rather uncleanly (they easily melt in hands, &c.); and (*c*) their introduction into the rectum by a finger represents a by far more unpleasant procedure than an injection by means of a syringe. 5. In one group of cases, however, suppositories are to be preferred to enemata. It is the group mentioned (sub. 3, *f*) where a relatively slow action is desirable, and where lubricant effects of glycerine are intensified by those of cacao butter. [Dr. Polübinsky, when reviewing the literature on the subject, quotes the following papers: 1. Anacker, *Deutsche med. Wochensch.*, No. 37, 1887; 2. Report of the *Landes-Medicinal-Collegium* on Oidtman's patented 'Purgativ' in the *München. med. Wochensch.*, No. 49, 1887; Otto Seifert, *ibid.*, 1888, p. 146; 4. St. v. Vamossy, *Wiener med. Presse*, 1887, p. 1642; 5. Cadogan Masterman, *Brit. Med. Jour.*, Jan. 21, 1888 (with a noteworthy reference to Dr. Warden, who was treating constipation by glycerine more than seventeen years ago); 6. Novotny, *Pester med-chir. Presse*, No. 13, 1887; 7. Subbotic, *Centralbl. für Gynecologie*, No. 27, 1888; 8. Reisinger, *Prager med. Wochensch.*, No. 22, 1888; 9. Ullmann, *Centralbl. für die gesammte Therapie*, 1888, August; 10. Boas, *Deutsche med. Wochensch.*, 1888, p. 469; 11. Sauter, *Pharmac. Zeitung*, 1888, p. 491; 12. Heck, *ibid.*, Sept. 12; Ger. Haecker, *Therap. Monatshefte*, 1888, p. 425. Dr. Polübinsky's list may be supplemented by the following papers and notes: 1. Jul. Althaus, *Brit. Med. Jour.*, vol. ii., 1887, p. 1379; 2. J. A. Wilson, *ibid.*, 1888, Jan. 21, p. 168; 3-4. C. J. R. McLean and W. Prowse, *ibid.*, Feb. 25, p. 449; 5-6. J. Bunting and C. Palmer, *ibid.*, March 10, p. 569; 7. W. Barrett Roué, *ibid.*, June 16, p. 1281; 8. G. Grewcock, *ibid.*, Dec. 22, p. 1424; 9. J. Davison, *ibid.*, Jan. 12, 1889, p. 111; 10. J. V. Harle, *ibid.*, Feb. 2, p. 241; 11. Kroell, *Therap. Monatshefte*, 1888, p. 11; 12. G. Rice, *München. med. Wochensch.*, No. 1, 1889 (glycerine enemata are recommended as a means for diarrhœa and rectal prolapsus in children); 13. G. A. Carpenter, *Lancet*, 1888, Nov. 10, p. 905; 14. I. S. Kolbasenko, *Rüsskaia Meditzïna*, 1888, No. 39, p. 623.—*Rep.*]

V. Idelson, M.D.

Article 1448.

EGASSE ON STROPHANTHUS AND THE STROPHANTHINES.*

The subject of the nature and composition of th various species of strophanthus and their activ principles has recently excited a great amount o attention among chemists and therapeutists, both i this country and upon the Continent. In Franc particularly, the investigations have been numerou and the discussions animated, and it really seem now as if we were soon to be placed in possessio of reliable data. The two principal varieties of th drug at present met with in the market are th *Strophanthus hispidus* and the *Strophanthus glabra.* The experiments of Professor Fraser, of Edinburgh were first brought before the public at the Cardi meeting of the British Medical Association in 188 though papers by him on the chemistry of the pla had already been published in the *Proceedings* o the Royal Society of Edinburgh in 1869 and th *Journal of Anatomy and Physiology* in 187 These were carried out with the seeds of th

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* *Bull. Gén. de Thérap.*, Jan. 30, 1889.

S. hispidus, and he had succeeded in isolating a principle to which he gave the name of strophanthine. This substance, however, when boiled in the presence of sulphuric acid, is decomposed into glucose, and an insoluble crystalline body, known as strophanthidine. Strophanthine is therefore a glucoside, and yields about 37 per cent. of strophanthidine, which, on the other hand, is a stable body. As early as 1877 MM. Hardy and Gallois succeeded in obtaining two non-nitrogenous crystalline bodies from the *S. glabra* (*Inée*), which, however, do not give the reactions of vegetable alkaloids. These products are intensely poisonous, and, when injected hypodermically, rapidly arrest the heart. The tufts of the plant, subjected to the same treatment, yielded an alkaloidal substance which does not possess the physiological properties of strophanthine, and to which they gave the name of *Ineine*. The results obtained by Fraser on the one hand and Hardy and Gallois on the other, present several points of difference. According to Fraser, the strophanthine obtained by Hardy and Gallois is in reality strophanthidine, since it does not yield glucose on boiling with an acid. M. Arnaud, who has gone very carefully into the subject, considers that the product really contains strophanthine, or rather *Ouabaïne*, in combination with other substances. Mr. Elborne (*Pharm. Jour.*, March 1887) obtained from the seeds of the *S. hispidus* 20 per cent. of fixed oil, 1·5 per cent. of a glucoside with alcohol, and 2·9 of a glucoside with water, together with albuminoids and insoluble residue. The fixed oil, after a time, deposits colourless pyramidal crystals, free from bitterness, and possessing the properties of Fraser's strophanthine. A. W. Gerrard, experimenting with the same seeds, isolated a glucoside resembling that obtained by Fraser. Helbing (*Pharm. Jour.*, May 1887) gives the following test for strophanthine. Dissolve a trace of strophanthine in a drop of water and add a trace of perchloride of iron, followed by a small quantity of concentrated sulphuric acid. A reddish precipitate forms, which, in a day or two, turns to an emerald or dark green colour, lasting for some time. This test, however, is not reliable, as it gives analogous results with impure digitaline. Soon after this Fraser succeeded in obtaining a purer strophanthine of definite composition. By means of evaporation *in vacuo* of a watery solution of the alcoholic extract of the *S. hispidus*, Catillon (*Arch. de Pharmacie*, iii., 1888) obtained 9·5 per 1,000 of a strophanthine crystallising in cauliflower crystals, though by the same method Gabon had obtained 50 parts per 1,000 of strophanthine crystallising in plates. Finally, M. Arnaud succeeded in isolating a perfectly pure product of uniform composition by a method of his own (*Académie des Sciences*, July 16, 1888). His product is a white substance, of an intensely bitter taste, crystallising in fine stellate crystals. With water it forms a hydrate, from which the water evaporates spontaneously, or on heating. It is but slightly soluble in water, freely so in alcohol, insoluble in ether, bisulphide of carbon, and benzine. It is precipitated by tannin from aqueous solutions. It does not contain nitrogen, and its formula is $C_{31}H_{48}O_{12}$. When boiled in dilute acid it is decomposed into glucose, and a body the properties of which have not so far been investigated.

The formula of strophanthine shows it to be the superior homologue of another glucoside, *Ouabaïne*, discovered by Arnaud in the root and wood of a plant, also belonging to the family Apocynaceæ, the *Acokanthera Ouabaio*, an aqueous extract of which is employed as an arrow poison by the Komalis of Eastern Africa. The physiological experiments of M. Gley (*Académie des Sciences*, July 30, 1888) demonstrated the close analogy between these two glucosides. Arnaud's most recent researches prove the identity of ouabaïne with the substance extracted by him from *S. glabra*. Ouabaïne presents itself in thin, transparent scales, rectangular in shape, melting at 185° C. It is soluble in nineteen parts of water; insoluble in chloroform, ether, and absolute alcohol. Boiled with dilute acids it yields a sugar, *isodulcite*, and an insoluble resin. Its formula is $C_{30}H_{48}O_{121}$, H_2O. Physiologically this product is much more actively poisonous than strophanthine obtained from *S. hispidus*. Lastly, Catillon has succeeded in isolating a nitrogenous non-poisonous product which he thinks may be the diuretic principle.

Turning to the physiological aspect of recent researches, we find that the first conclusions with respect to the action of the drug pointed to its being exclusively a motor (muscular) poison. They were based on the observed fact that, when the main artery of the limb was tied, the reflex contraction provoked under ordinary circumstances by irritation of the sciatic nerve on the opposite side disappeared in from forty to fifty minutes, while on the other side the muscle still contracted in response to stimulation of the nerve, though contractility soon disappeared. On the side on which the vessel had been ligatured nervo-muscular contraction was preserved. It was subsequently shown that the medulla was also acted upon, as proved by variations in the rhythm of the heart observed simultaneously with those of extra-cardiac pressure. A dog, weighing 12 kilogrammes, was injected with a centigramme of the crude drug in aqueous solution. A rapid increase in the duration of the systole was at once noticed, coinciding with a diminution in the number of pulsations. This period, of short duration, is followed by one of acceleration, during which the systole becomes very short, and the blood-pressure remains high instead of falling. Then, little by little, the heart slows down, arterial pressure falls to zero, and the heart stops beating. The same phenomena are observed on the curarised animal, as also in animals in whom the medulla or the vagi have been severed. Gley and Lapicque admit that strophanthus acts on the medulla as well as on the cord, but they doubt whether the effect produced on them is sufficient to account for the cardiac and muscular phenomena. They concede that strophanthus exerts a primary action on the muscular fibres, but suggest that the effect is secondary rather than primary. We have, therefore, to decide between two theories—that of Polaillon and Carville, according to which strophanthus is *exclusively* a muscle poison; and that of Gley and Lapicque, who insist on the effects produced on the nervous system. A third theory, by Combemal, Groginer, and Mairet, of Montpellier, calls attention to the irregularity and variability of the effects of the drug according to the system attacked, and even according to the different elements of the same system. Their experiments led them to conclude that the drug acted principally on respiration, on the heart, and on the alimentary canal. We are not therefore so far in a position to decide whether strophanthus is a muscle, a nerve, or an irritant poison.

MM. Sée and Gley took up the matter once more in their communication to the Académie de Médecine (Nov. 13, 1888). They employed the strophanthine from *S. hispidus.* A fortieth of a milligramme stopped the heart of a frog in systole in ten minutes, and no further reaction could be produced mechanically or electrically. The cardio-vascular changes produced were:—First, slowing of the heart with stronger beat, and a considerable rise in blood-pressure; secondly, irregularity of heart-beat, with short periods of acceleration and persistent slowing. The blood-pressure remains high for a time, and then suddenly falls, coinciding with the arrest of the heart. The persistence of the high blood-pressure, independently of the rate of heart-beat, shows that strophanthus acts *directly* on the vaso-motor system by constricting the muscular coats of the arteries. The most remarkable feature is the increase of blood-pressure coinciding with a lengthened systole, the usual thing being for the amplitude of the arterial pulsation to diminish with a high pressure. Experiment, therefore, would seem to indicate that strophanthine is most useful for the purpose of increasing cardiac activity, but in this respect it is inferior to spartein, which is less toxic and does not cause so marked a rise of blood-pressure. Strophanthine has a more powerful effect on the heart than digitaline, but is inferior to the latter, in that it provokes a general vaso-motor constriction.

Therapeutically, the value of strophanthus as a cardiac remedy has been rated from far below to far above that of digitalis. The truth is probably that, though of undoubted value in a certain class of cases, it is not necessarily the cardiac remedy *par excellence.* In cases of asystole with œdema or ascites, the diruretic action is well marked provided the kidneys themselves are not diseased. In the latter case, any temporary augmentation of the urinary secretion, due to enhanced blood-pressure, is compensated for by a subsequent diminution. The drug does not cause renal mischief *per se*, but is likely to aggravate pre-existing lesions; hence it is contra-indicated in all cases of nephritis. It would be tedious to analyse all the results that have been chronicled, the more so as the actual value of the drug was very admirably discussed by Bucquoy and Dujardin-Beaumetz early last year. Bucquoy prefers the alcoholic extract to the tincture, and considers it a cardiac remedy of the first order. In lesions of the mitral valve it increases the strength of the contractions when compensation has become insufficient, and attenuates when it does not cause the disappearance of the symptoms of asystole. The diuretic effects are constant and marked, the excretion of urine amounting sometimes to four and even five litres daily. It is superior to other cardiac remedies in cases of narrowing of the mitral orifice, and *often* relieves the dyspnœa, the sense of oppression, &c. It also gives remarkable results in aortic lesions when the heart begins to fail, and may succeed and prove of service just at the time when digitalis is contra-indicated. It is readily borne, is not cumulative, and tolerance is not established by prolonged use. The only symptom to which it sometimes gives rise is a painless diarrhœa which ceases when the drug is discontinued. Bucquoy discountenances its use in advanced heart-disease, especially when accompanied by arterial sclerosis and interstitial nephritis, and also when the cardiac substance is notably deteriorated. He has never witnessed any untoward effects even when given *mal à propos.* Dujardin-Beaumetz corroborated most of these conclusions, and declined to admit the existence of a strophanthine nephritis as alleged by Cazeaux, though he considers the drug worse than useless in renal insufficiency. The result always depends on the condition of the myocardium. On the whole the tincture or alcoholic extract gives better results than strophanthine, the quality and strength of which varies immensely according to the source from which it is obtained. The dose of the alcoholic extract is from ½ to 1 milligramme several times daily, equivalent to 2½ to 5 minims of a 1 in 5 tincture.

ALFRED S. GUBB.

ARTICLE 1449.

SOMMERBRODT ON THE CHIEF FACTOR IN THE CAUSATION OF CARDIAC STRAIN.*

PROFESSOR SOMMERBRODT is well known as an authority on the subject of which he writes. His theory is that a dicrotic or hyperdicrotic pulse, after severe exertion, is caused by increased respiration, and that it persists for some time afterwards. This is explained by assuming that the sensory nerves of the lungs are excited, owing to an increase of intra-bronchial pressure. This sensory excitation has a reflex action upon the cardiac inhibitory nerves, and also a reflex depressing influence upon the vaso-motor nerves. The above is a summary of his views by Professor Oertel, and the paper now published is more or less an elaboration of this subject, which shall be presented to the reader in as few words as possible. Peacock, in 1865, attributed the frequency of heart-disease amongst Cornish miners to over-exertion of the body, and various authorities have supported this assumption. But more recently there has been a tendency to deny that there is any connection between heart-disease and over-exertion. Bernheim (*Leçons de Clinique Médicale,* Paris 1877) says, 'The heart is not a muscle that gets tired. . . . The word "strain" betrays a false and unphysiological conception.' Others again reserve the point. Even Leyden in his paper 'On Heart-diseases from Over-exertion' (*Zeit. für klin. Med.*, Band ii., p. 108, 1886), states that the theory of cardiac strain is 'not perfectly justified, and not generally recognised.' All observers are unanimous in agreeing that severe exertion increases the arterial blood-pressure, and throws more work on the heart, but the difficulty lies in this, that so many people over-exert themselves without prejudice to their hearts. A special factor is required for this to occur, and this factor has not hitherto been recognised. Let us study this rise of arterial blood-pressure, and the provision for its compensation. The former cannot be due to compression of the capillaries by muscles in powerful contraction, as Traube asserted, for Oertel's observations with Von Basch's sphygmomanometer have shown that the increase of blood-pressure persists long after the exertion is over. As regards the compensatory provision:—1. All muscular activity causes an increase of carbonic acid and a diminution of oxygen in the blood. 2. The increase of CO_2 in the blood so influences the innervation of the lungs that the breathing becomes deeper and quicker. 3. Such breathing increases the intra-bronchial pressure. 4. This causes, as the author was the first to show ('The Reflectory Relations between the Heart, the Lungs, and the Vessels,' *Zeit. für klin. Med.*, Band ii., 1881) irritation of the sensory nerves of the lungs. 5. Hence a reflex depressant action on the vaso-motor nerves, causing relaxation of the walls of the vessels. This reflex the author claims as his discovery ('On a Hitherto Unknown Important Function of the Human Organism,' Laupp, Tubingen, 1882). 6. Lastly, this relaxation of the vessel-walls lowers the arterial blood-pressure. Thus the chain forming a compensatory provision against the ill-effects of strain is established.

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* Professor Dr. Julius Sommerbrodt (Breslau), 'On the Chief Factor in the Causation of Cardiac Strain.' (*Berliner klin. Wochensch.*, No. 5, 1889.)

We may next examine how this arrangement behaves under such over-exertions of the body as have certainly caused, in the opinion of competent observers, sudden or subsequent injury to the heart. Such strains may be divided into three groups :—(1) Overlifting ; (2) fatiguing marches under heavy loads, also strenuous labour in a cramped attitude (miners' work) ; (3) strenuous exertion in old age. The reported cases in which sudden aortic insufficiency or aortic rupture has followed the attempt to lift a heavy weight are numerous. Chronic dilatation of the left ventricle with irregular action is another effect of the same cause. During a very strenuous bodily effort after a deep breathing the breath is held—*i.e.* the thorax is fixed in the inspiratory position, so that the muscles of the arms and abdomen may exert their full power. Here there is no rise of intra-bronchial pressure, hence no irritation of the pulmonary sensory nerves, and no reflex action on the vessels to cause relaxation. During this time a sphygmographic tracing (*see* original paper) shows—firstly, a considerable rise of the pulse-curves above the basal line, from diminished flow of venous blood to the thorax ; and, secondly, three certain signs of increased arterial tension—viz., a diminution of the individual pulse-waves, a higher situation of the recoil elevation (nearly at the summit), and emphasis of the small elasticity waves. These alterations reach their maximum within twelve seconds from the time the breathing is suspended. Another series of curves is given, showing the effects of prolonged suspension of the breath for three minutes together in a man who was able to remain a long time under water (the 'fish man'). The same appearances as before are seen, only more still pronounced. The arterial blood-pressure rises to its climax, all compensatory changes being prevented. Besides the suspension of the respiration there is violent muscular exertion going on in swimming under water, and this greatly increases the effect.

Turning now to the second group, it is evident that in marching under a heavy load, especially uphill, the load is carried high between the shoulders, the body is bent, the thorax is fixed, the abdominal muscles rigid, and hence, necessarily, the respiration is superficial. So, again, with miner's work. The natural corrective of severe muscular work is quickened and deepened breathing ; in work such as miners undergo this is impeded. Tight-lacing is a potent cause of evil in this respect in the opposite sex ; and when rapid dancing is persisted in under the influence of excitement, the strain upon the heart is very severe ; hence fainting is not uncommon. Even sudden death has ensued, but we never hear of such cases amongst the male sex, nor amongst the peasantry (unless where the patient was anæmic ?).

The third kind of work often injurious to the heart is work done by people advanced in years. When such a man ascends a mountain, the breathing is quickened, and the intra-bronchial pressure is increased. Hence Hering's reflex action upon the heart causing quickened action, and Sommerbrodt's reflex action upon the vaso-motor nerves tending to cause vascular dilatation. But in this case the vessels are probably atheromatous, and cannot dilate ; hence the peril of such work to old people.

Thus the chief factor in the causation of overwork of the heart is the abolition, either from the respiratory conditions under which the work is undertaken, or from pathological alterations of the vessels, of the natural compensatory provision against injury to the heart. If this provision is in full play, and the heart be healthy, strenuous exertion is undergone without such strain. Of course a number of predisposing conditions may enter into the question—*e.g.* a more or less fatty condition, anæmia, weakness of the heart-muscle in convalescence, &c., &c.

E. J. EDWARDES, M.D.

ARTICLE 1450.

SAINSBURY ON A CASE OF DIFFICULTY OF SPEECH.

DR. HARRINGTON SAINSBURY has recorded in the *Journal of Mental Science* for January last a curious case of speech deficiency in a girl of 5½ years. The nature of her pronunciation is illustrated by giving the way in which the child repeated the letters of the alphabet.

'A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
sa	p	see	t	c	sa	see	sa	sow	sa	ta	sow	sa	sa	sow	p	two

R	S	T	U	V	W	X	Y	Z
sa	sa	t	soo	fee	tow-soo	sa	wov	sa

'In these equivalents the "a" is to be pronounced as in ma, the "ow" as in sow, the animal. It will be observed that of the whole alphabet the only letters she could give quite correctly were C, P, T ; that B and D were respectively rendered P and T, and that the letter V underwent a corresponding change, and was rendered "fee." For the remaining letters there was apparently no relation between the normal and abnormal sounds—the pronunciation of Q being perhaps an exception. It is remarkable that the S sound is so frequently repeated.'

Dr. Sainsbury found the child healthy, well formed, and the hearing good. She had suffered from fits in teething, and was somewhat backward in intelligence, which was attributed by her aunt to her being left very much to herself at school, owing to her unintelligible speech. At this early age want of school instruction would be scarcely noticed in the evolution of the intelligence. The child had a supplementary little toe on the right foot. Deformities of the toes and fingers are commoner with idiots than with normal children, but they occur in both.

Dr. Sainsbury deserves our thanks for recording this case. It is a loss to philological science that physicians do not give us more of such contributions. We should gladly have had at greater length his speculations on the nature of the deficiency. He confines himself to suggesting, 'that the speech error may be of the nature of a simple defect, *i.e.* fault by arrest, the centres in the cortex having failed to develop; or it may be of the nature of an actual perversion. In either case there may be simply an inability to reproduce the sound given, the child being conscious of the imperfection of her own copy, or there may be a condition analogous to colour-blindness, a failure to recognise sound differences. Cases of aphasia, the result of disease, furnish us with instances of both of these kinds of error in speech.'

Evidently Dr. Sainsbury has got a right grasp of the subject. Let us consider the result of the child's effort to pronounce given sounds. The difficulty is with the consonants, not with the vowels. The little girl could not pronounce G, K, and Q, hence the muscles of the pharynx and palate were inactive. Her pronunciation of C was but that of S, thus the only consonants she could pronounce distinctly were P and T. These were used in place of B and D, in the same way V got changed into F. These are all analogous sounds readily interchangeable. In the one group, B, D, and F, the breath is sent through the mouth more strongly, and there is a slightly different adaptation of the tongue and lips. The nasal sounds were not pronounced, and the child failed to give the delicate motions of the tongue required for L and R. The deficiency is, therefore, due to want of facultative power in certain muscles of the pharynx and palate, tongue, and lips, greater in the former organs than in the latter. Whether this is owing to want of full power in the nerves which supply the muscles, or in defect in some part of the brain, it would be difficult to decide. On the one hand, as Dr. Sainsbury has observed, there are cases where, after recovery from motor aphasia, the pronunciation of particular letters has been lost. On the other hand, it is common for idiot children to fail to pronounce particular letters or sounds, and they sometimes substitute for one sound another nearly related, as B for P or F for V. This, indeed, may be the case with ordinary children. But through careful training these children, even the imbeciles, sometimes come to overcome the deficient utterance and to pronounce correctly. This favours the view that the failure was owing to deficient facultative adjustment.

It may, however, be noted that certain people have a preference for particular sounds, and sometimes a difficulty in pronouncing others. This we see in our own island: the southern inhabitants have dropped some sounds, as is manifest from our spelling. Grown up English people often fail in uttering some guttural sounds still kept up in the Scotch dialect, though English children brought up in Scotland pronounce them quite easily. Then some tribes are said to be quite unable to pronounce sounds very common in the Aryan group of languages. My friend, the late Dr. W. A. F. Browne, in a paper on 'Impairment of Language,' writes :—'The Hurons and Iroquois fail entirely to pronounce the labials, and the Indians of Port au Français do not possess seven of our consonants, and, moreover, that La Hontun spent four days in vainly endeavouring to teach a Huron to pronounce B, P, and M.'

We notice in the breaking up of the Latin into the different Romance languages that different sounds or pronunciations have been favoured by different nations, and this is probably owing to structural differences in the organs of articulation too delicate to be detected in any other way than the resultant modification of sounds. W. W. IRELAND, M.D.

SURGERY.

RECENT PAPERS.

1451. GIRDLESTONE, T. M.—Suppurating Hydatid of the Abdomen in a Pregnant Woman treated by Free Incision of the Cyst. (*Australian Med. Jour.*, Dec. 15, 1888.)

1452. WOLFF, DR. JULIUS.—A Case of Arthrectomy of the Knee-joint in Neuropathic Joint-disease. (*Berliner klin. Wochensch.*, No. 6, 1889.)

1453. POTTER.—The Traumatic Origin of Psoas Abscess. (*Pacific Med. Jour.*, February 1889.)

1454. KÖNIG.—On Osteotomy. (*Centralbl. für Chirurgie*, No. 1, 1889.)

1455. MUSCROFT.—A New Method for Arresting Bleeding in Surgical Operations. (*Journal of the American Association*, Jan. 19, 1889.)

1456. GRÜNBAUM.—On Rib Resection. (*Centralbl. für Chirurgie*, No. 7, 1889.)

1457. LLOYD.—On Cerebral Surgery. (*Birmingham Medical Review*, February 1889.)

1458. MIKULICZ.—The Operative Treatment of Prolapse of the Rectum. (*Archiv für klin. Chirurgie*, Band xxxviii., Heft 1.)

1459. JACOBUS.—Perforation of the Vermiform Appendix. (*New York Medical Record*, Feb. 21, 1889.)

ART. 1451. *Girdlestone on the Safe Treatment of Hydatids of the Abdomen.*—A pregnant woman, aged 30, came under Mr. Girdlestone's care at the Melbourne Hospital. A hydatid cyst in the abdomen, below the umbilicus, had been noticed for nine months, and had been frequently tapped. Her health had recently become impaired; the evening temperature was high. Mr. Girdlestone decided to open and clear out the cyst. In order to secure it he passed three long steel acupressure pins through the abdominal walls and the front of the cyst cavity. The pins were placed parallel to each other, and about three-quarters of an inch apart. A silk ligature was passed round them in a figure-of-eight loop, so as to retain the cyst in contact with the peritoneal lining of the abdomen with a moderate amount of pressure. Next day the ligature silk was divided, the middle pin withdrawn, and the cyst opened by an incision two inches long, made between the two pins which had been left on either side. The cut edge of the hydatid was fixed by four interrupted wire-sutures to the margin of the skin-wound. A pint of pus and daughter-cysts came away. The cavity was drained by means of a large rubber tube. The two remaining pins were withdrawn. Two ounces of a warm (1 in 1,000) solution of perchloride of mercury were injected into the cyst. The abdomen was dressed with perchloride gauze dusted with iodoform. The wire sutures were allowed to remain in for a week, and the wound closed gradually. About the beginning of November the patient was safely delivered of a child. She was in good health in December. [No doubt precautions are needed in the treatment of hydatids of the abdomen. Mr. Girdlestone describes a case where he punctured a hydatid with a trocar, and subsequently introduced a soft catheter drain. The patient did well for about three weeks, the cyst had greatly diminished in size, and was thought to be nearly empty, when suddenly, on some slight exertion, it became detached from the abdominal wall, and fatal peritonitis followed. The reporter has known of fatal results after simple aspiration of an abdominal hydatid.

Mr. Girdlestone finds that the pins which transfix the cyst allow the scalpel to be used, and a free opening can be made, so that the daughter-cysts can be removed. The pins prevent danger during this operation, and, by fixing the cut edge of the cyst to the skin, after-danger of the same kind is averted.—*Rep.*] ALBAN DORAN.

1452. *Wolff on Arthrectomy in Neuropathic Joint-disease.*—The patient, a workman, aged 43, sustained in 1884 a slight accident to the left knee, but was able to get about, though with some difficulty, four days afterwards. The limb remained somewhat painful for a few years, and the man did light work. In 1887 he fell on some ice in the street, and the limb became worse. He had before remarked some shortening. Some swelling appeared, and in June 1887 the knee was of enormous size, the joint being freely movable, but there was no pain. The limb was much shortened. Mere inspection was enough to show that the case was one of neuropathic joint-inflammation. On puncture 3½ oz. of bloody viscid fluid escaped. The opposite knee-jerk was preserved, but there existed myosis and rigidity of the pupil and analgesia of both lower limbs, also impotence, occasional incontinence of urine, and now and then lancinating pains in both legs. Herr Mendel examined the patient (with Herren Hirschberg and Remak) and diagnosed transverse myelitis in the upper part of the lumbar region. Herr Remak did not concur in this diagnosis by exclusion, but rather suspected an anomalous tabes dorsalis. [Since Charcot's work the term 'arthropathia tabidorum' has been used, but Mitchell, the first observer, described such joint-affections as occurring in traumatic spinal diseases as well as in tabes. Czerny has published three such cases, due to syringomelia; Riedel's case occurred after injury to peripheral nerves, like the above case. The term 'arthropathia tabidorum' ought to be replaced by the expression neuropathic joint-disease.] Arthrectomy was performed on June 4, 1887. The joint contained about five ounces of a bloody fluid, the synovia was covered with granulations. The crucial ligaments had nearly disappeared, the semilunar entirely. The top of the tibia was deeply hollowed out, with a wall-like border overlapping the condyles of the femur, and presenting osteophytes. A loose piece of bone, the size of a walnut, lay in the posterior intercondyloid space. Both condyles were enlarged. All granulations, loose bodies, and osteophytes were removed, and the wound was packed with iodoform gauze. Healing went on favourably, and by October the patient could slightly flex and extend the joint, and soon walked ten kilomètres. But he attempted work too soon, and this caused reopening of the wound and slight suppuration from two fistulous openings. By February 1888 he was as well as in October. The patient could walk some miles without fatigue, and could stand with the diseased leg alone for more than a minute. The fact that there was no relapse speaks against Charcot's supposition of atrophy of the spinal ganglion-cells (of the grey substance of the anterior cornua), also against implication of the peripheral nerves of the joint. The process was more probably one of simple degeneration, occurring after alteration of the ligamentary and capsular apparatus. (See *Jürgen's Berliner klin. Wochensch.*, 1886, p. 855.) Such a favourable result as the foregoing has never hitherto been obtained to the author's knowledge, and it shows that wounds in neuropathic joint-affections may heal aseptically, and without any relapse. The secondary slight fistulæ did not constitute a true relapse.

E. J. EDWARDES, M.D.

1453. *Potter on the Traumatic Origin of Psoas Abscess.*—In a clinical lecture delivered at Cooper Medical College, San Francisco (*Pacific Medical Journal*, February 1889), Professor S. Lewis Potter gave the details of three interesting cases which, in his opinion, fully support the view held by Dr. Sayre that chronic psoas abscess is in most cases due to local injury. These cases show that psoas abscess may arise from traumatism and without the existence of any vertebral caries. In two of the cases the symptoms developed shortly after the occurrence of a severe fall in a skating rink. In the natural impulse to keep the body upright whilst the heels gave way in skating, the agents employed to flex the trunk upon the thighs would be principally the psoas muscles, and by a sudden and violent action of these structures some of their fibres might be torn, or detached from their ligamentous union. If rest be insisted upon, the injury may be repaired by the organism, but, if neglected, it will result in an abscess formed at the site of the injury, which will eventually destroy the muscle. In one of Dr. Potter's cases death occurred from hæmorrhage into the sac of the abscess, and reference is made to two other cases, one recorded by Dr. Levis, the other by Dr. John Ashhurst, in which a like result was noted. There had been perforation in the first case of the external iliac, and, in the second case, of a branch of the gluteal artery.

1454. *König on Osteotomy.*—In a paper on the Division of large Tubular Bones by broad sculptors' Chisels (*Centralblatt für Chirurgie*, No. 1, 1889) Prof. König, of Göttingen, states that he has for some years in osteotomy used chisels, from one inch and a quarter to two inches in breadth, and has found that he can thus divide the bone very speedily and without the exercise of much force. Three cases are reported to show the advantages of such instruments. One is a case of ankylosis of the knee-joint treated by division of the articular extremity of the femur, another of division of the shaft of the femur for shortening and distortion after fracture of this bone, and the third a case of division of the femur after Mac Ewen's method for genu valgum. An incision having been made at the usual situation, the soft parts were separated by an elevator from the anterior and posterior surfaces of the bone, and the sides of the wound separated so as to allow the introduction of a chisel broad enough to divide at once the whole thickness of the femur. The chisel was not applied at right angles to the long axis of the bone, but obliquely, so as to be driven obliquely from below and inwards, upwards, and outwards. An osteotomy thus performed is usually completed in a few minutes, except in cases of adult subjects, in which a longer time is required.

1455. *Muscroft on a New Method for Arresting Bleeding in Surgical Operations.*—The *Journal of the American Med. Association* of Jan. 19, 1889, contains a paper on a new method of arresting hæmorrhage during operations, read by Dr. C. S. Muscroft, of Cincinnati, at the last annual meeting of this Association. The method consists in temporary compression of the main artery between a pin introduced under the vessel, and a figure-of-eight ligature. It was first applied by the author in August 1886 in a case of amputation at the hip-joint. A long needle, no pin of sufficient length being at hand, having been passed through the skin on the inner side of the femoral vein at a distance of half an inch from the sheaths of the vessels, and an inch and a half below the groin, its point was first pushed backward until the sheaths were passed, and then thrust across to the outer side of the vessels, where it was forced again through skin. The needle was then fixed by a figure-of-eight ligature. After removal of the limb, the femoral artery was seen to be perfectly closed, and standing out from the surrounding tissues for a distance of three-fourths of an inch with its end wide open. A permanent ligature was then applied. Two days later the same form of compression was adopted with equally good results in amputation at the shoulder-joint. The needle in this case was passed from before backwards parallel to the axilla. In a third case it was applied for the arrest of secondary hæmorrhage after amputation of the leg. It was retained four days, without any inconvenient result such as local soreness or neuralgia of the limb. Nine other cases are also referred to in which this method was perfectly successful in preventing or arresting hæmorrhage. Dr. Muscroft holds that this method has strong claims for favour on account of its simplicity, its readiness of application, and its safety, and he feels sure from the results which have followed the application of this mode of suppressing hæmorrhage, that it cannot fail to come into general use. The application of the pin, Dr. Muscroft thinks, is likely to prove useful in the treatment of surgical forms of aneurism, especially those of the extremities, and so to do away with the necessity of a dangerous operation, or of manual compression, which, it is stated, so seldom succeeds.

1456. *Grünbaum on Rib Resection.*—The *Centralbl. für Chirurgie*, No. 7, 1889, contains the report of a case in which Dr. Grünbaum, of Warsaw, removed with success the whole of the tenth rib on the right side, together with the corresponding transverse and articular processes of the tenth dorsal vertebra, for necrosis. The patient, a young man, aged 23, when first seen by Dr. Grünbaum, presented an open sore, about two inches in length, over the tenth rib in the axillary line on the right side. This sore was lined by unhealthy granulations, and at the bottom of it was exposed bare bone. Pressure along the posterior part of the rib and over the spinous process of the tenth dorsal vertebra caused much pain. The patient having been put under the influence of an anæsthetic, the rib was exposed by incision of the soft parts as far as the angle. The posterior part of this incision laid open a cavity, of the size of an apple, which contained thin, ill-smelling pus, and surrounded the head and neck of the rib and the transverse process of the tenth dorsal vertebra. The head and neck of the diseased rib having been carefully dissected away from the adherent pleura, the whole of the bone, together with adherent vertebral process, was removed without any wounding of this membrane. A cavity was now discovered in the body of the tenth dorsal vertebra, which was occupied partly by yellow tuberculous material, partly by vascular granulations. The contents of this cavity and also the granulations on the inner surface of the abscess cavity, together with shreds of tissue and purulent clots, were then removed with the sharp spoon. Although the wound healed favourably and with but little discharge of thin fluid, the patient remained feverish for a long time after the operation, but he ultimately made a complete recovery. This case, Dr. Grünbaum states, was certainly one of an acute form of osteomyelitis granulosa with suppuration, and caries of a part of the tenth dorsal vertebra and of the whole of the tenth rib on the right side.

1457. *Lloyd on Cerebral Surgery.*—Mr. Jordan Lloyd has recently published some 'Practical Observations on Cerebral Surgery with Notes of Cases' (*Birmingham Med. Review*, February 1889). The intra-cranial conditions towards which surgery holds out some prospect of relief are, it is pointed out, by no means rare, as it now appears justifiable to open the skull—certainly as an exploratory measure—in clearly diagnosed cases of progressive pressure from tumour, abscess, or blood-clot, or of continuous irritation from cicatrices, gummatous residua, or the like. Mr. Lloyd expresses a doubt whether cerebral surgery is not being slightly overdone. It is not yet possible, he thinks, to speak of permanent results in the majority of cases which have been submitted to trephining, but the best will very probably be seen after operations for abscess and extra-cerebral blood-clots. In his remarks on the importance of an accurate diagnosis in cases of cerebral disease supposed to be amenable to operation, Mr. Lloyd agrees with Von Bergmann that the surgeon ought to be able, with the salient features of the case clearly before him, to appreciate exactly the probable nature of the condition he is asked to treat. After some remarks on the localisation of intra-cranial lesions, cranio-cerebral topography, and the details of operative treatment, Mr. Lloyd gives notes of nine cases in which the skull was opened by himself for the removal or relief of disease. Of these, two are instances of intra-cranial tumour—the first, of glioma of the left lobe of the cerebellum, correctly diagnosed before operation, but found to be too extensive for removal; the second, of tumour at the base of the brain, in which case the symptoms pointed to localisation in the motor area. Death resulted in both cases, in the first, forty-eight hours, and, in the second, ten hours after the operation. The third and fourth are cases of cerebral abscess. In one of these cases death occurred on the seventh day after trephining; in the other, the operation resulted in recovery, although, after an interval of three months, certain serious nervous symptoms, such as vertigo, hemianopsia, and amnesia, had not quite disappeared. The fifth case is one in which the skull was opened in three places for supposed intra-cranial abscess, and the cerebrum punctured in more than twenty places, and the cerebellum in at least ten. No ill-effects followed this operation, and the patient, who, it is stated, was extremely bad at the time, went home apparently quite well four weeks afterwards, and remained so when last seen three months later. The subject of the sixth case died from basal meningitis five days after trephining for cerebral abscess associated with purulent infiltration of the mastoid cells, and otitis media suppurativa. Two instances are next recorded of trephining for headache, one with relief, the other with negative results. In the ninth and last case, which was one of traumatic epilepsy, very satisfactory results seem to have resulted from trephining at the seat of injury.

1458. *Mikulicz on the Operative Treatment of Prolapse of the Rectum.*—In a recent contribution (*Archiv für klin. Chirurgie*, Band xxxviii., Heft 1) Dr. J. Mikulicz, of Konigsberg, describes his method of dealing with prolapsed rectum, and puts on record seven cases in proof of its safety and efficiency. Of prolapse of the rectum there are, it is pointed out, three forms. The first and simplest of these, prolapsus ani, is a mere ectropium of the mucous membrane of the rectum in which the other coats of the gut, especially the muscularis, are seldom involved. In the second form, that of true prolapsus recti, the protrusion consists of all the coats of the intestine and, like the invaginated portion in intussusception, presents on section two tubes of intestine one within the other, and in contact by their serous surfaces. The third form, to which the name is given of prolapsus coli invaginati, is really intussusception of some part of the colon, and may be readily distinguished from the other forms by the fact that the external layer is not fixed to the anus, and that the finger can be passed into the rectum by the side of the protruded mass. In cases of chronic prolapsus recti, with ulceration and gangrene of the exposed mucous membrane, and a persistent tendency to further protrusion, excision of the protruded portion of the intestine is, according to Mikulicz, the most suitable treatment. The limited excisions devised by Dieffenbach and Dupuytren are, it is stated, often useless and do not guard against prolapse, and cauterisation, though a milder proceeding, is still not free from risk and may cause stenosis of the anal portion of the gut. Partial excision and cauterisation will, it is true, result in contraction of the relaxed and softened sphincters, and of the immediately superjacent portion of rectum, and the constricted and rigid extremity of the gut will, if the case be a mild one, resist further protrusion from above; but in too many instances the vis a tergo overcomes this resistance and the cicatricial tissue yields sooner or later to renewed prolapse of the rectum. It is necessary, he states, to shorten the elongated and displaced rectum, and, in correspondence with this indication, to resect a large portion of the prolapse. This is held to be the most rational course in all old cases of prolapsus recti, and particularly after relapse. The operation, described in this paper, was first performed with success by Nicoladoni, and resembles in some respects one advocated by Esmarch, in which, before resection, the upper part of the prolapsed gut is fixed tightly by ligature to a bougie introduced into the rectum so as to prevent any exposure of the peritoneal cavity. Mikulicz, after having passed two sutures through the free lower end of the prolapse, in order to stretch and fix in required positions the gut, makes a transverse incision through the anterior layer of the prolapsed mass, about half an inch below the anal margin. The inner tube of the prolapse having been thus exposed, the serous margins of the outer and inner layers are brought together by sutures, in order to shut off the peritoneal cavity. The inner tube having been divided transversely along the whole length of the outer incision and the intestinal canal opened, the cut edges of the inner and outer tubes are then fixed together by a second row of sutures. The posterior surfaces of the tubes are then divided and sutured in like manner, and the whole of the prolapse thus detached. In most cases the peritoneal sac does not descend between the layers of gut behind, the space being usually occupied by mesocolon which contains numerous vessels. In this operation Mikulicz insists on the use of silk in preference to catgut for the material of the sutures.

1459. *Jacobus on Perforation of the Vermiform Appendix.*—In the *New York Medical Record* of February 2 Dr. Arthur M. Jacobus reports an interesting case of perforation of the vermiform appendix and general peritonitis, successfully treated by laparotomy, which operation was performed by Dr. W. Gill Wylie. At the end of his paper Dr. Jacobus suggests the following conclusions:—'1. That typhlitic diseases are intraperitoneal; that in nearly every instance they originate in inflammation or perforation of the appendix or cæcum, usually caused by fæcal impaction or foreign bodies; that, even though these diseases often do not primarily end in suppuration, still their tendency is to recur and at last end fatally by septicæmia, or shock from ruptured abscess or purulent peritonitis. 2. That, in view of the foregoing, all diseases of this region giving symptoms of inflammation or peritonitis, without regard to the question of pus or abscess, and which do not yield promptly to suitable medical treatment and are progressive, should be treated by laparotomy at the earliest possible period. 3. That when peritoneal or intestinal adhesions or pus-sacs exist they should always be broken up, the abdominal cavity thoroughly douched with sterilised plain water at a temperature of 105° F., the wounds sutured, and the cavity drained by glass tubes. 4. That, excepting in undoubted cases of simple post-cæcal abscess unaccompanied by peritonitis, the incision should be made either vertically over the caput coli or in the linea alba below the umbilicus; and preferably the latter operation when extensive peritonitis or adhesions are suspected. 5. That, whether in operative cases or not, opiates should be used as little as possible; but, on the other hand, saline or vegetable cathartics (followed by enemata) should be used from time to time to relieve the inflammation, tympanites, pain, and fever, and particularly to drain the peritoneal cavity of serous or purulent effusion.' In discussing the question of operative interference in cases of perityphlitic abscess Dr. Jacobus states that danger, when it occurs, lies not in the laparotomy but in gross carelessness in performing it, or in the gravity of the disease for which it is performed. Laparotomy for peritonitis from typhlitic diseases is, it is pointed out, certainly much simpler than when it is performed for the removal of tumours, pyosalpinx, extra-uterine fœtation, and the like. It is fair to suppose that an operation for perforative peritonitis, performed within the first three days of the attack, ought in at least 75 per cent. of the cases to terminate successfully. In the case reported in this paper the appendix vermiformis was not sutured or distended in any way, and Dr. Jacobus is of opinion that if it had been meddled with, the result of the operation would not have been so good. Although there was a fæcal odour for some days after the laparotomy, the fistulous opening closed promptly. Dr. Jacobus is a strong advocate of the method of treating peritonitis by laxatives, instead of by the old method of extreme narcosis. He has, he asserts, seen several instances of general and pelvic peritonitis in which it appeared certain that without free catharsis the patient would have died from cardiac or respiratory paralysis, excessive tympanites, or, in purulent cases, from septicæmia. Enemata are regarded as useful adjuncts in the after-treatment, but when applied alone relieve but slightly either flatulence or inflammation. W. Johnson Smith.

GENITO-URINARY SURGERY.

RECENT PAPERS.

1460. GUYON, PROFESSOR. — On Vesical Prostatism. (*Annales des Maladies des Organes Génito-Urinaires*, February 1889.)

1461. RECAMIER, M.—Prostatism in a Young Man—Arterial Atheroma. (*Annales des Mal. Gén.-Urinaires*, February 1889.)

1462. GAUTRELET, M. E.—Uro-azotimetre. (*Ibid.*)

1463. KERMISSON AND DESNOS. — On the Fibrous Transformation of the Periprostatic Tissues and Consecutive Stricture of the Rectum. (*Annales des Maladies Gén.-Urinaires*, February 1889.)

1464. DELEFOSSE.—On a Case of Lithotrity. (*Ann. des Maladies Génito-Urinaires*, February 1889.)

1465. BRUCE CLARKE.—On a Case of Nephrolithotomy.

1466. CARVER.—On Two Cases of Nephrectomy.

1467. MORE MADDEN.—On the Rapid Cure of Cystitis in Women. (*Brit. Med. Jour.*, March 2, 1889.)

1468. RALFE AND OTHERS.—Suppression of Urine caused by Impaction of Calculi in both Ureters, relieved by Operation.

1469. HARRISON, REGINALD.—Notes on Surgery of the Kidney. (*Liverpool Med. Jour.*, January 1889.)

ART. 1460. *Guyon on Vesical Prostatism.*—The name 'vesical prostatism' has been given by Prof. Guyon to a set of symptoms due to a peculiar condition of the bladder, prostate, and urinary tract, in which the essential pathological change is that of arterio-sclerosis. The term appears to us a very faulty one. It is said to be given 'because the symptoms which characterise the third stage of the disease depend upon an alteration of the vesical muscle,' and 'this alteration is often consecutive to hypertrophy of the prostate.' Without any discoverable obstruction in the urethra, there occurs great distension of the bladder, with congestion of the mucous surface, and sometimes hæmaturia, and this may give rise to the suspicion of new growth, but Professor Guyon considers that the distension of the bladder (together with, we presume, the absence of obstruction to the passage of a catheter) ought to make diagnosis clear. Following the distension comes loss of contractile power, with, therefore, retention and sometimes dribbling incontinence. In some cases the prostate is found to be enlarged, but in others the bladder shows the main, and perhaps sole, evidences of disease. These evidences are those of fibrous and fatty infiltration of the walls, with consequent atrophy of the muscular structure, the result of which is seen in the dilatation of the organ. At the same time similar changes occur in the prostate, ureters, and other parts of the urinary tract; and, moreover, the nature of these changes is indicated by the occurrence of arterio-sclerosis in the vascular system generally. Many of the cases show marked atheroma of the arteries, though they are comparatively young, and in the specimens he shows there is often enormous dilatation of the ureters, thinning of the pelvis of the kidney, and suppuration in the kidney, without any discoverable obstruction in the lower part of the urinary tract, and the dilatation therefore takes place from above downwards. With regard to treatment, he insists on the importance of slowly emptying the bladder, so as to avoid the danger of increasing the tendency to hæmorrhage. This must, therefore, be done at different sittings. He also urges the importance of avoiding any septic infection, and if pyuria occurs he recommends the use of boracic acid injections of a rather concentrated solution.

1461. *Recamier on Prostatism in a Young Man.*—M. Recamier, one of Professor Guyon's internes, contributes a paper on the same subject founded on a case under Professor Guyon. The man was only 40 years of age, and came into hospital with incontinence following retention of urine. The prostate was enlarged, and the bladder enormously distended. It was found that his superficial arteries were typically indurated, the arch of the aorta could be felt beating with marked hardness, the pulse showed the characteristic tracing of atheroma by means of the sphygmograph, and there was pronounced arcus senilis. The symptoms were those of the third stage of prostatism as defined by Professor Guyon. He was treated by careful emptying of the bladder, and was discharged cured in a few weeks. A somewhat parallel case is quoted from the service of M. Launois at the Hôpital Necker, where a man, of the age of 49, was admitted with incontinence of urine and very enlarged prostate, but here there was stricture of the urethra. However, there was in this case advanced atheromatous condition of the radial and femoral arteries, and it was considered that the nature of the disease was that of arterio-sclerosis.

1462. *Gautrelet's Uro-azotimetre.* — In the same journal is described an instrument proposed for the ready determination of urea, uric acid, and creatinine by means of the reaction of hypobromite of soda.

1463. *Kermisson and Desnos on the Fibrous Transformation of the Periprostatic Tissues and Consecutive Stricture of the Rectum.*—Three cases are detailed in which stricture of the rectum occurred to a limited extent, as a consequence, in the opinion of the authors, of chronic inflammatory disease in or around the prostate, and the importance of this as a possible cause of rectal stricture they think has been hitherto overlooked. True chronic abscesses of the prostate may be tubercular, or the result of acute abscess which has been incompletely evacuated, and M. Kermisson maintains that rectal stricture as a consequence of these conditions has been proved in his cases. We cannot but acknowledge the possibility of this occurrence, but we think that he has overlooked the natural folds which exist, and which correspond with the position of the early supposed appearance of stricture bands. They are described as semilunar folds projecting from the front of the rectum at the back of the prostate, and as rather ill-defined. We do not mean that the structures described were not pathological, but it seems to us that the normal structures indicate the natural situation of the inflammatory deposit. The folds of Houston seem to have been much overlooked by writers on the pathology of these parts. The sole cause found for the fibrous infiltration of the rectal walls in the cases here given was some chronic suppuration in the prostatic region, and this had lasted fifteen years in one case, and four or five years in the other two. In one case the cause of the prostatic inflammation was traumatic, for the pelvis had been fractured, and perhaps the urethra ruptured; but, in the other two, the disease followed on a long-standing blennorrhagia. The small number of cases given hitherto will not warrant any opinion being formed as to the likelihood of such a stricture being more or less amenable to treatment, according to the cause of the prostatic inflammation; but it seems to us evident that the more prolonged and intractable the original inflammation, the more probable is the extension of any chronic induration in the tissues of the rectum. The suggestion of the possible cause of stricture of the rectum being in old-standing prostatic or periprostatic inflammation will be of practical value in the treatment of such cases, and to M. Kermisson we owe this.

1464. *Delefosse on a Case of Lithotrity.*—Dr. Delefosse gives an account of a case of large and hard vesical calculus in which crushing and removal were effected at one sitting, but chloroformisation was incomplete, owing to some faulty but not detailed action of the heart, and the bladder was very irritable and contracted. However, the case is so imperfectly given that we have no evidence of the chemical nature of the stone, of the weight of the débris removed, nor does it seem quite certain that all was removed.

1465. *Bruce Clarke on a Case of Nephrolithotomy.* At the West London Medico-chirurgical Society, in January, Mr. Bruce Clarke showed a patient on whom he had twice performed the operation with an interval of six months. At the first operation two large and six or seven small stones were removed, and after this the pyuria continued, though much lessened. At the second operation five or six small stones were removed, and the urine still contained a little pus and lithates, possibly due to more stones in the upper part of the kidney, and further operative interference may be necessary.

1466. *Carver on Two Cases of Nephrectomy.*—At the Cambridge Medical Society two cases of nephrectomy were detailed, in which Mr. Carver had operated. The first was for pyonephritis. A lumbar fistula remained after opening the abscess, and consequently a further operation was undertaken, the ureter and vessels being separately tied, and an atrophied right kidney removed. The case was progressing favourably. The other case was for sarcomatous tumour of the left kidney in a woman. In this case also the vessels and the ureter were separately tied, and the patient left hospital in about six weeks in apparently good health; the removed kidney being double the normal size—the upper part being occupied by a sarcomatous growth.

1467. *More Madden on the Rapid Cure of Cystitis in Women.*—The author urges the adoption of operative measures when troublesome cystitis continues after removal of every discoverable cause like gonorrhœa, misplaced uterus, fibroid growths, &c. Dr. Emmet has advocated the formation of a temporary vesico-vaginal fistula, so as to give rest to the mucous membrane, but Dr. More Madden adopts the simpler plan, which was originally suggested by McTeale, of dilating and paralysing the urethra, but he adds what he considers a necessary measure, the topical application of carbolic acid to the mucous surface. The urethral canal is dilated so as to admit the finger, and this is repeated as often as is found necessary; but, according to his experience, the plan of dilating and brushing the surface with the pharmacopœal glycerine of carbolic acid seldom requires to be repeated more than two or three times, at intervals of a week, to effect a cure of even the most aggravated cases of cystitis in women.

1468. *Ralfe and Others on Suppression of Urine Caused by Impaction of Calculi in both Ureters, relieved by Operation.*—At the Clinical Society of London an important case was detailed by Dr. Ralfe and Mr. Godlee, and gave rise to some interesting remarks by various speakers. A lady, aged 26, had been under care for acute rheumatism four years previously, and for attacks of renal colic on both sides, with hæmaturia. On July 31, 1888, she had an attack of right renal colic, which passed off. It was followed the same day by an attack of left colic, which did not pass off, and when seen on Aug. 8 she had had complete suppression for fifty-three hours. The left kidney was exposed in the usual manner, and incised. Very little urine escaped, and no stone was found, but on passing the finger down the course of the ureter a small stone was felt about two inches below the kidney. The ureter was drawn toward the wound and opened by a vertical incision sufficient to allow of withdrawal of the stone; a tube was left in the kidney. The bladder and the lower ends of the ureters had been previously explored by dilating the urethra and introducing the finger. There was an immediate relief of the symptoms. Large quantities of urine were passed by the wound, but none by the urethra, for three days. On Aug. 13 there was a slight attack of right renal colic, and another on the 23rd. On the 15th the tube and stitches were removed, and on the 28th the wound had completely healed. On Sept. 3 the right kidney was exposed and incised, but only a mass of gravel was found in it, and no stone was met with in the ureter, though it was traced down as far as the point where it crosses the iliac vessels. Blood appeared in the urine immediately after the operation, and also some gravel. By Sept. 14 the discharge of urine from the wound was very slight, and the tube was accordingly removed, after it had been ascertained that the ureter was patent by pouring some ink-stained fluid into the kidney, which the patient instantly passed per urethram. The bladder was also sounded, but no stone was struck. On the following day a small stone was passed per urethram. Between this time and the end of October the patient had three attacks of pain in the right side, one of which was rather severe. She is now, however, perfectly well. The peculiarities of the case, and the justification of the first and second operations, were discussed by the authors. Dr. Goodhart observed that the calculus removed from the right ureter was too small to have caused total obstruction, and that its retention must therefore have been due to spasm. He urged that such a condition was precisely such a one as would have been amenable to the opium and belladonna treatment, though in that particular case the coincidence of a calculus in the other ureter justified the operation. Mr. Bruce Clarke explained the arrest of the calculi at the particular spot two inches below the kidney by the fact that a peculiar constriction was always found at that part of the ureter. He himself employed a flexible catheter with a porcelain tip, to make sure of the patency of the ureter. He observed that the rough spicular surface of the smaller calculus would explain the spasm which must have prevented its onward passage. The President concurred in the preceding remarks, and asked why the patient had been placed on her hands and knees while massage was performed. He failed to see that anything was to be gained thereby over the usual position on the back.

Mr. Godlee, in reply, said he was unable to explain why that particular position had been adopted. He agreed with Dr. Goodhart's remarks, but explained that the patient was in urgent danger of dying from suppression of urine, and they had no means of ascertaining the size of the calculi. He himself had not found it easy to catheterise the ureter.

1469. *Harrison on Notes on Surgery of the Kidney.*—Mr. Reginald Harrison makes some practical remarks upon some of the operations affecting the kidney, and classifies them under the headings of—1. Nephrectomy. 2. Nephrotomy. 3. Digital exploration of the kidney. 4. Nephrolithotomy. 5. Fixation of movable kidney. 6. Exploration of the ureter. Nephrectomy he would apparently confine to cases of destroyed and suppurating kidney, and he does not look with favour on the operation for malignant disease. So far as the mode of operating is concerned, he gives preference to the lumbar over the abdominal incision. Nephrotomy for the evacuation of matter he is warmly in favour of, and considers that the most suitable cases for operation are those where the abscess is limited to one organ and has little or no direct connection with the ureter. He details two interesting cases in which excellent results followed the operation. In suppurative tuberculosis of the kidneys his experience of nephrotomy has not been so favourable, and he would not recommend it unless there was something to indicate with precision the presence of a single abscess not properly discharging itself by the ureter. Where nephrotomy has to be practised he urges the importance of exploring the upper part of the corresponding ureter by means of a bougie, for a permanently blocked ureter means sooner or later a destroyed kidney which may require removal. He narrates a case of pyonephritis which he incised for the relief of distension-pains, but blood continued to appear in the urine, and this would, he considers, have been more easily traced to its true cause—a papilloma of the bladder—had he carefully explored the ureter at the time of operation and found it patent. Digital exploration of the kidney and its neighbourhood he practises as a preliminary to any operative procedures on the kidney, for our means of diagnosis are not too certain. And he narrates a case of severe renal colic where he explored and found nothing, but the patient was cured. Another case by himself, and two others by other surgeons, are referred to where a similar satisfactory result followed the operation without its being explainable. Nephrolithotomy he has performed on three occasions, and in two of these a stone plugging the ureter was removed and relief given. In the third case the operation was repeated and two small calculi removed on the first occasion, while four large ones were extracted on the second, but the patient died seven hours afterwards. He is almost inclined to think they were formed subsequent to the first operation five months before, but this seems to us hardly probable. The state of the kidney at the *post mortem* examination made it a question whether total extirpation of the organ in the first place might not have been advisable. He is inclined to favour in rare cases the fixation of a movable kidney and also the exploration of the ureter from the loin. Mr. Godlee reports an interesting case in the *Practitioner* (vol. xxxix.), where a calculus, which had projected from the ureter into the bladder, was forced into the female urethra by manipulation from the vagina. W. W. Wagstaffe.

THERAPEUTICS.

RECENT PAPERS.

1470. Hennig, Dr. A.—A New Method of Treating Epidemic Diphtheria. (*Berliner klin. Wochensch.*, No. 8, 1889.)

1471. Petrescu (Bucharest).—On Bryonia Alba in Hæmorrhage. (*Berliner klin. Wochensch.*, No. 8, 1889.)

1472. Kolbasenko, Dr. J. S.—On Purgative Effects of Glycerine Enemata. (*Russkaia Meditzina*, No. 39, 1888, p. 623.)

1473. Dueñas, L.—Antipyrin in Asthma. (*Rev. de las Ciencias Medicas*, Habana.)

1474. Hiller.—Creolin in Affections of the Stomach and Bowel. (*Centralbl. für klin. Med.*, January 1889.)

1475. Wile.—On Hydriodic Acid. (*Journal of American Association*, January 1889, p. 116.)

1476. Leech.—On Nitrite of Ethyl. (*Med. Chronicle*, December 1888, p. 177.)

1477. Dемoulin and Others.—The Employment of Salts of Copper. (*Rev. Gén. de Clin. de Paris.*)

1478. Bouchard and Others.—On Creasote.

1479. Lepine.—On Phenacethydrazine.

1480. Geneuil, Dr.—On Injections of Lemon Juice in Epistaxis. (*Revue de Thérap.*, February 1889.)

1481. Chopin, Mdlle. Dr.—On the Elimination of Salicylic Acid in Various Conditions of the Kidneys. (*Bull. Gén. de Thérap.*, Feb. 13, 1889.)

1482. Huchard, Dr.—On the Treatment of Chlorosis. (*Rev. Gén. de Clin. et de Thérap.*, Feb. 21, 1889.)

1483. Flammarion, Dr.—On a Case of Tetanus cured by Acetanilide. (*Bull. Gén. de Thérap.*, Feb. 28, 1889.)

1484. Aubert, Dr.—Iodogen Paper as a Counter-Irritant. (*Revue Gén. de Clinique*, Feb. 21, 1889.)

1485. Lavaux, Dr.—On Electrolysis in the Treatment of Stricture of the Urethra. (*Rev. Gén. de Clin.*, Feb. 21, 1889.)

1486. Felix.—The Treatment of Anthrax.

1487. Treatment of Alopecia Areata.

1488. Vaseline Pomade. (*Bull. Gén. de Thérap.*)

1489. Lozenges for Fœtid Breath.

1490. Treatment of Bunions.

1491. A Topical Antiseptic.

Art. 1470. *Hennig on a New Method of Treating Epidemic Diphtheria.*—Lime-water is the remedy which Dr. Hennig regards as a specific in epidemic diphtheria, 'like quinine in malaria, mercury in syphilis, salicylic acid in acute rheumatism.' Lime-water is an antimycotic, coagulates albumin, and dissolves mucin; hence any membranes are loosened and rendered harmless. No other agent can approach it in effectiveness. It should be given as a gargle, to be used every two hours or oftener, and a little should be swallowed frequently. Ice is also applied externally. To show how harmless is lime-water, a little girl three years old got hold of the bottle and drank about a pint in half an hour. There was diphtheria in the house; the child remained well, and was none the worse for the dose.

1471. *Petrescu on Bryonia Alba in Hæmorrhage.* After clinical and experimental trials, the root of white bryony is recommended as a powerful anti-hæmorrhagic. A decoction is made by boiling 20 or 25 parts of the root in 300 parts of water, down to half its bulk; it is then filtered and sweetened. From one to one and a half ounces may be taken every half hour. A glycoside, brëin, is also prepared. The watery and alcoholic extracts also, in doses of 15 or 30 grains, have proved efficacious in metrorrhagia, hæmaturia, hæmoptysis, hæmatemesis, and epistaxis. E. J. EDWARDES, M.D.

1472. *Kolbasenko on Glycerine Enemata in Constipation.*—In the *Russkaia Meditsina*, No. 39, 1888, p. 623, Dr. I. S. Kolbasenko, of Kopal, writes that, following Drs. O. Seiffert's and Novotny's recommendation, he has tried glycerine enemata (*a*) in two anæmic women of 31 and 23, with habitual constipation depending upon intestinal atony; on each occasion a tablespoonful of the remedy gave rise to abundant stools in from five to ten minutes; (*b*) in an infant, aged 8 months, suffering from constipation of three days' standing, accompanied by obstinate vomiting and meteorism; an injection of a dessert-spoonful was followed in three hours by several free motions, the infant making a speedy recovery; (*c*) in a child suffering from three days' constipation in connection with a skull fracture; a dessert-spoonful caused motions in from two to five minutes, notwithstanding a comatose state of the patient; and (*d*) in a man of 55, with bilious relapsing fever and constipation of five days' duration; a tablespoonful produced a profuse defecation. In none of the patients any unpleasant effects were noticed. The author feels sure that 'glycerine enemata promise to become a valuable means, especially in pauper and country practice.'

V. IDELSON, M.D.

1473. *Dueñas on Antipyrin in Asthma.*—Antipyrin is very valuable in cutting short the paroxysm of asthma. Dr. Dueñas gives three cases in which he has employed it. 1. A child of 11, who suffered from nocturnal attacks of catarrhal asthma. The first day on which he took the antipyrin, in dose of 25 centigrammes, the attack was cut short, and the child slept quietly the whole night. On the following nights the same result was obtained, but the dose had to be increased. 2. A woman, 34, in whom the attack occurred periodically at the approach of the catamenia. The effect was great at first, but the dose had to be increased gradually to two grammes, when it was abandoned. 3. In an asthmatic with chronic bronchitis the antipyrin at first gave relief, but afterwards seemed to increase the intensity of the attack. Antipyrin is thus a remedy of great value in the asthmatic paroxysm, but, like other remedies used in this disease, it soon loses its effect, and it does not influence the ulterior course of the disease.

1474. *Hiller on Creolin in Affections of the Stomach and Bowel.*—Hiller, of Breslau, has given creolin internally in numerous cases. He recommends it in tepid solutions (1 to 5 per milligramme) to wash out the pleura after operation for empyema, in cystitis (1 to 5 to 500), and especially in diseases of the stomach and bowel. In meteorism, whatever its cause, it is very useful; in flatulence from acute or chronic intestinal catarrh; in fulness and swelling of the epigastrium after food; in chronic catarrh of the large and small intestine; in acute gastric catarrh; in simple diarrhœa and dysentery; in ectasia of the stomach consecutive to stenosis of the pylorus. In all these cases creolin was most useful. He gives it in gelatine capsules in the dose of 3 to 5 decigrammes or more, three times a day, one hour after food. He also has found good from it in irrigations of the bowel in diarrhœa and carcinoma of the rectum, and says it may be thus useful in cholera and typhoid. In two cases creolin proved to be an excellent antiparasitic for tænia solium and oxyuris vermicularis. G. D'ARCY ADAMS, M.D.

1475. *Wile on Hydriodic Acid.*—In the *Jour. of the American Med. Association*, January 1889, p. 116, Dr. Wile draws attention to the value of hydriodic acid. It was not until 1878 that this drug could be used, as it decomposed very rapidly; but about that time an unalterable syrup was presented to the profession, and several observers have found much benefit from its use. The author finds that in chronic bronchitis, fifteen drops of this syrup three or four times a day, gradually increasing the dose drop by drop, was of most signal service. It is very valuable in all forms of chronic lead poisoning, and it gives marvellous results in scrofulous diseases of children. In infantile eczema, enlarged glands, cold abscesses, indolent sores, small doses of the syrup, gradually increased until it cannot be borne stronger, will produce most beneficial results. The author is now trying this drug in a case of obesity. In syphilis it is most valuable, and in cases of mercurial salivation, or poisoning, it has proved most useful.

1476. *Leech on Nitrite of Ethyl.*—In the *Med. Chronicle*, December 1888, p. 177, Dr. Leech contributes a paper on the uses of nitrite of ethyl. The older processes recommended for the preparation of this spirit did not lead to a uniform composition, but of late years much attention has been paid to find out some means of preventing the spirit of nitrous ether from losing its ethyl nitrite. Some two years ago it was shown that glycerine tends to prevent the loss of nitrite of ethyl from its solution in alcohol, and Messrs. Dunstan & Dymond have lately prepared a dilute solution of nitrite of ethyl in absolute alcohol containing 5 per cent. of glycerine, which will keep some time without change. Like other nitrites, this drug causes dilatation of the vessels, and markedly decreases arterial tension; it not only relaxes the muscles of the arterioles, but also of those of the smaller bronchial tubes, thus dilating bronchial tubes unduly narrowed by spasmodic contraction of their muscles. The action of nitrite of ethyl is not very rapid, and several minutes elapse before its action on the vessels is distinctly perceptible, but its action on the bronchial muscles sometimes becomes perceptible in less than a minute, whilst its physiological influence may last an hour or more. The dose required to produce the physiological effect is small; half a drachm of a 3 per cent. solution will usually produce dilatation of the vessels, as shown by the distinct lowering of the tension of the pulse. Turning to its therapeutic uses, the author states that, like other nitrites, it is a diuretic and diaphoretic, but inconstant in action. It does not act by directly stimulating the glandular secreting structures, but by its power of dilating the vessels, consequently the effect varies with the condition of the circulation. In the treatment of ailments connected with high tension, ethyl nitrite solution is of great value. In cases of dyspnœa, where with high tension the heart's power is beginning to fail, it often acts like a charm, especially if bronchial spasm complicates the cardiac condition. It is, perhaps, in asthmatic and bronchitic affections that this drug will be found of the most marked benefit. In using nitrite of ethyl it is necessary to know exactly the strength of the solution, and one containing 3 per cent. in alcohol is the best form to employ. The ordinary spirit of nitre sold does not contain a definite amount of the nitrite, which is, perhaps, a good thing, as unpleasant symptoms might arise from the too free use of this drug by patients who are in the habit of taking it without the order of a physician. If the solution prepared by Dunstan & Dymond be used, one point must be borne in mind—namely, that it quickly decomposes if mixed with water, so that it must not have water added until just before it is taken.

RICHARD NEALE, M.D.

1477. *Demoulin and Others on the Employment of Salts of Copper.*—M. Demoulin, of Ghent, has successfully treated croup in children from 3 to 9 years of age by administering daily 40 centigrammes of a copper salt. M. Luton, of Reims, publishes in the *Rev. Gén. de Clin. de Paris* cases of tuberculosis and treatment with copper. M. Stocquart, of Brussels, also records a case of tuberculous arthropathy of the wrist successfully treated with salts of copper. The patient was a girl, aged 22. At the outset an ointment, composed of sulphate of copper (4 gr. to 30 gr. of vaseline) was applied. The skin became irritable, but the swelling diminished, and the articulation became more flexible. The external treatment was suspended, and the following pills (three daily) were administered:—Neutral acetate of copper, 2 centigrammes; extract of gentian, 3 centigrammes. A few days after the patient could use her wrist. Six months later morbid symptoms appeared in the right lung, and pain reappeared in the wrist. The same treatment, internal and external, was repeated, and the patient completely recovered.

1478. *Bouchard and Others on Creasote.*—Since the experiments made by Drs. Bouchard and Gimbert creasote has taken a prominent rank among French therapeutic agents. M. Bouchard treated 93 phthisical patients with creasote, administering 40 centigrammes daily, and occasionally increasing the dose to 60, 80 centigrammes, or even 1 gramme. Fifty-four of the patients were benefited by this treatment, and 25 were apparently completely cured, Dr. J. Sommerbrodt, of Berlin, who has made tuberculosis his special study, has employed this treatment in about 5,000 cases within the last nine years. He employs gelatine lozenges containing 5 centigrammes of creasote. He administers one on the first day, and gradually increases the dose until the fourth week, when he administers six lozenges daily. This treatment is continued during several months. The effects of creasote are particularly apparent in tuberculosis when administered at the outset of the affection, and in catarrh of the apex with induration. In a week or so the expectoration, and (subsequently) the cough, diminish. After a few days the fever abates or disappears; the strength and appetite return. In pulmonary catarrh and chronic bronchitis the effects of creasote are still more rapid and complete. Dr. Bouchard attributes to this substance an elective action on pulmonary lesions, and Dr. Sommerbrodt believes that it possesses a positive specific action. It is essential that creasote should be obtained pure, as extracted from beech-tar or merely wood-tar. One of the preparations of this substance most commonly employed in the Paris hospitals is Dr. Clertan's creasote drops. Each of these contains 5 centigrammes of creasote enclosed in a thin, transparent, and perfectly soluble capsule. They are highly recommended on account of their convenient form and perfect purity.

1479. *Lépine on Phenacethydrazine.*—M. Lepine has made experiments on frogs and guinea-pigs with a new antipyretic, phenacethydrazine. He considers that this substance has a deleterious action on the blood, although it has not such a destructive action on the blood globules as antipyrine and acetanilide. In guinea-pigs it determines intra-globular methemoglobinhæmia at the outset, and subsequently diminishes the number of corpuscles. M. Lepine has administered phenacethydrazine to several febrile and ataxic patients, in doses not exceeding 3 grs. The results were satisfactory, and proved that this substance is not dangerous when employed in a temporary manner.

W. VIGNAL.

1480. *Geneuil on Injections of Lemon Juice in Epistaxis.*—Dr. Geneuil uses an ordinary glass urethral syringe with which he washes out the nostrils with warm water as a preliminary to injecting a syringeful of freshly expressed lemon júice. He has succeeded in arresting promptly several violent attacks of epistaxis by this means, and seldom more than one application was required. The author does not credit the citric acid with the styptic properties of the juice, he having on several occasions substituted a concentrated solution of citric acid without obtaining equally good results. The juice contains other substances besides the acid, to which its effects are probably largely due.

1481. *Chopin on the Elimination of Salicylic Acid in Various Conditions of the Kidneys.*—The subject is of interest on account of the discussions relative to the use of salicylic acid as a preservative which resulted in its being forbidden by law on the ground that though tolerated by healthy persons, it might give rise to serious trouble in those whose kidneys were diseased. It can be detected in the urine by means of the perchloride of iron even in the proportion of 1 in 500,000. It was not until 1873 that the fact was formally proclaimed, that 'active drugs may become poisonous, even in small doses, when the kidneys are diseased.' The points to be noted in investigating the effect of renal disease on the elimination of a drug are:—(1) The moment of its appearance in the urine; (2) the duration of the elimination; (3) the total amount excreted in the urine; (4) the chemical changes of the portion retained in the organism and the physiological effects of the transformed products. After ascertaining these *data*, the results must be studied from a therapeutical point of view, especially in renal diseases, in order to find out whether the ordinary conditions of elimination are disturbed in such cases. The results of the investigation may be summarised as follows:—1. Salicylic acid augments the quantity of the urine when the kidney is healthy, or the seat of *chronic* disease. The quantity is diminished in acute nephritis. 2. The amount of urea, uric acid, and phosphoric acid eliminated, is also increased. 3. About 80 per cent. of the salicylic acid ingested finds its way into the urine. When the kidneys are diseased, the elimination of the acid is affected; (*a*) the first appearance in the urine is retarded and the duration of the elimination is increased; (*b*) the total amount eliminated is less by from 10 to 30 per cent. than with healthy kidneys. Salicylic acid is eliminated for the most part unchanged; the remainder appears as (*a*) salicin; (*b*) salicyluric acid. The latter is more abundant when there is renal disease. 4. Albumen in the urine is always increased in amount by salicylic acid. These results are held to justify the restrictions placed on the use of salicylic acid as a preservative, seeing that if innocuous when ingested by persons with healthy kidneys it may give rise to serious symptoms in cases of renal disease.

1482. *Huchard on the Treatment of Chlorosis.*—The author points out that it is a mistake to push the ferruginous treatment in all cases of chlorosis. The total amount of iron in the body under ordinary circumstances is not more than a few grammes, and even in chlorosis all of it has not disappeared. Any surplus iron is more likely than not to give rise to gastro-intestinal irritation. He prefers to give the iron in the form of iron filings mixed with chalk, powdered coffee, or rhubarb, in the form of a powder. Vinegar, to which chlorotic patients are often extremely partial, is not to be absolutely forbidden; on the contrary, a draught containing hydrochloric acid, taken after each meal, is a powerful aid to digestion. The constipation should be overcome by means of podophyllin, and the uterine functions should be stimulated at the approach of the menstrual epoch by means of hot baths and an infusion of saffron internally. Massage and general gymnastics are also to be commended as adjuncts. In many cases when iron has failed, arsenical preparations, in conjunction with bitters, are successful, and the binoxide of manganese has given good results when both iron and arsenic had been tried in vain. The binoxide can be given in a powder with charcoal and powdered calumba root, or it may be given in the form of the lactate of manganese, made into pills with extract of cinchona. When iron is well borne he recommends the following formula:—℞ Ext. cinchonæ, ext. gentianæ, ext. rhei, āā, 5 grammes; ferrum tart., 5 grammes; ext. nucis vom., 50 centigrammes; ol. anisi, ♏v.; glycerine, q.s. To be mixed and divided into 100 pills. Two to be taken before each meal.

1483. *Flammarion on a Case of Tetanus cured by Acetanilide.*—A. P., 11 years of age, had his hand caught between some cog-wheels, inflicting severe, contused, and lacerated wounds. The hand was 'trimmed' and dressed with the strictest antiseptic precautions. During ten days the patient did well, there being no fever nor other untoward symptom. On March 11 the antiseptic dressing was discarded, and on the 12th the patient had a rigor and complained of trismus. The same evening, while his hand was being dressed, he had an attack of spasm of the glottis which nearly proved fatal. During the next few days the tetanus became general, notwithstanding strong doses of opium, morphine, and chloral. On April 5, as there was no improvement, he was ordered 20 centigrammes of acetanilide every four hours. After the first dose or two the patient was markedly relieved, and looked forward to taking his medicine. The treatment was continued until April 20, when the patient had sufficiently recovered to be enabled to dispense with further treatment.

1484. *Aubert on Iodogen Paper as a Counter-Irritant.*—Iodogen paper consists in the superposition of three layers of paper, separated from each other by pieces of thin rubber. The middle piece of paper is thin and unsized; the outer pieces are of filter-paper, and are impregnated—one with a solution of iodide of potassium, and the other with a solution of iodide of potassium and tartaric acid. These are carefully dried, and must be protected from damp. When they are moistened for use, the acid reacts on the alkaline iodide and sets free hydrochloric acid, which decomposes the iodic acid and liberates the iodine. If placed on the skin, and covered with a piece of rubber tissue, the skin is reddened and the usual effects of iodine are produced; but the effects are limited to the particular spot, and the clothes, &c., are not stained.

1485. *Lavaux on Electrolysis in the Treatment of Stricture of the Urethra.*—After a careful study of the literature of the subject and a number of personal observations, the author concludes that electrolysis cannot be considered as applicable to the general treatment of strictures of the urethra, dilatation yielding much more prompt and satisfactory results. In exceptional cases it may prove of service, and might be tried before resorting to rapid dilatation or internal urethrotomy.

1486. *Felix on the Treatment of Anthrax.*—M. Felix, of Brussels, treats anthrax by the application, repeated thrice daily, of a thick layer of the following ointment:—℞ Ichthyol, 4 parts; simple ointment, 15 parts; the whole being covered with a layer of absorbent wool. On the following day he touches the points of suppuration with nitrate of silver.

1487. *Treatment of Alopecia Areata.*—Shave or withdraw the hairs around the diseased area as long as they come out easily, and apply every evening a mixture of equal parts of glacial acetic acid and chloroform. As the solution is highly caustic, only a thin layer should be applied, and this is best done by means of a camel-hair brush, which is squeezed to remove the superfluous fluid, and is then passed lightly over the diseased area.

1488. *Vaseline Pomade.*—The *Bull. Gén. de Thérap.* gives the following formula for the preparation of an excellent vaseline pomade, which is homogeneous, unctuous, and of a fine white colour: ℞ Vaseline (white), 500 parts; ol. amygdal. dulc., 50 parts; cera alb., 50 parts. Melt at a gentle heat, and incorporate gradually 50 parts of rose water. To make a 'cold cream,' spermaceti should be substituted for the wax.

1489. *Lozenges for Fœtid Breath.*—℞ Roasted and powdered coffee, 75 grammes; powdered charcoal, 25 grammes; boracic acid, 25 grammes; saccharin, 65 centigrammes; tincture of vanilla, 9·5 centigrammes; mucilage, 9·3 centigrammes. To make lozenges weighing 70 centigrammes each.

1490. *The Treatment of Bunions.*—Wash the feet with soap and water and then dry them. The healthy skin surrounding the bunion is protected by means of a layer of flexile collodion, and the bunion is then saturated with crystallised carbolic acid, melted by the aid of heat. The superfluous acid is blotted up with a little wool or bibulous paper. The application may require to be repeated at intervals of three or four days, and one or two applications generally suffice to effect a cure.

1491. *A Topical Antiseptic.*—Dr. Desesquelles recommends a mixture of one part of powdered β naphthol with two of powdered camphor. The two are triturated together, dry, until they unite to form a colourless or creamy liquid.

ALFRED S. GUBB.

POTASSIUM IODIDE AND MILK.—In the *Boston Medical Journal*, Dec. 27, p. 64, attention is called by Dr. Blair to the value of milk as a vehicle for the administration of potassium iodide. He states that a goblet of milk will almost completely cover the taste of a dose of the iodide without apparently interfering with its medicinal properties, and that by means of it a patient who could not tolerate ten grains of potassium iodide at a dose, was in a short time able to take forty grains without any symptoms of nausea.

PHARMACOLOGY

RECENT PAPERS.

1492. Marsh.—On Crystals of Boric Acid in Urine. (*Illustrated Medical News*, November 1888, p. 147.)

1493. Roniza and Negrita, Drs.—On Lantana Brasiliensis. (*Rev. de Thérap.*, Dec. 15, 1888.)

1494. Egasse, M.—On Cresylol and Creoline. (*Bull. Gén. de Thérap.*, Dec. 30, 1888.)

1495. Nicot.—On Cresylol. (*Bull. Gén. de Thérap.*, Feb. 13, 1889.)

1496. Carette, M. Honoré.—On Hoffman's Method of Testing for Albumen in the Urine. (*Bull. Gén. de Thérap.*, Feb. 13, 1889.)

1497. Gautier and Mourgues.—The Alkaloids of Cod-liver Oil. (*Comptes-rendus de l'Académie des Sciences du 7 Juillet*, 1888; reproduced in *Der Fortschritt*, Aug. 20, 1888, No. 16.)

Art. 1492. *Marsh on Crystals of Boric Acid in Urine.*—In the *Illustrated Medical News*, November 1888, p. 147, Mr. Marsh records the notes of a case in which he found boric acid crystals in the urine of a patient who had been taking 20 grains of the acid four times a day for three days. The urine was allowed to stand for twenty-four hours, and the deposit being examined large numbers of crystals of different arrangements were seen—such as 'rosettes,' 'comet-shaped,' &c.; in many cases the needles were noticed to form round a pus-cell. On evaporating to dryness, adding spirit to the residue and igniting, the characteristic green flame was obtained. The patient was suffering from cystitis, and was much relieved by the treatment, which did not disorder the digestive organs. The urine was kept in an uncorked bottle, and after three weeks no organisms were found, nor was there any disagreeable odour. Richard Neale, M.D.

1493. *Roniza and Negrita on Lantana Brasiliensis.*—The plant Lantana Brasiliensis (called by the natives Yerba Sagrada) grows in South America. An alkaloid has been obtained from it to which the name of lantanina has been given. It acts like quinine on the circulation and lowers the temperature. It is said to have the advantage over quinine of not giving rise to nausea, &c., in delicate persons. Its antipyretic properties have proved useful in certain cases which had resisted quinine. It is given in two-grain doses (pills), not exceeding half a drachm in the twenty-four hours. The tincture of lantana is difficult to take on acconnt of its exceedingly disagreeable taste.

1494. *Egasse on Cresylol and Creoline.*—Cresylic acid is a compound of three isomeric bodies, paracresol predominating. It possesses powerful antiseptic properties, superior even to those of phenol. It proved fatal to rabbits in doses of two parts in 1,000 of the weight of the animal, but is four times less poisonous than phenol. One part of the acid in fifty is sufficient to prevent the development of bacteria. Creoline is a by-product of the dry distillation of coal, freed from carbolic acid. Its composition is very complicated. It is a black liquid with a naphtha-like smell, forming a yellowish milky emulsion with water. It was first experimented with by Kortum in 1887 both as a hæmostatic and antiseptic. It has since been largely used in dressing wounds, and as an application for various parasitic and other skin diseases. Given internally (8 to 10 grains daily) it completely disinfects the stools, and it has been employed with benefit in digestive affections, characterised by abnormal fermentation, and in pulmonary tuberculosis. It is, however, an exceedingly disagreeable remedy to take, and is best given in the form of pills. For external use an alcoholic solution (1 in 10) or an ointment (1 in 10) may be prescribed. Unfortunately the substance possesses no definite composition, and is manufactured exclusively by a German firm.

1495. *Nicot on Cresylol.*—Cresylol, cresylic acid, or methylphenol, is a superior homologue of phenol, and is produced during the putrefaction of albuminoid substances. It is prepared by passing a current of oxygen through a mixture of toluene and chloride of aluminium. Fused with caustic potash it loses hydrogen and forms salicylate of potassium. As prepared in the laboratory it is a coloured liquid with an odour of creasote. It is strongly antiseptic, and its salts are more powerful in this respect than the acid itself. The cresylate of sodium is prepared by warming together 80 parts of cresylol with 140 of solution of soda and a litre of distilled water. The result is a saturated solution of alkaline reaction, soluble in water and with only slight odour.

1496. *Carette on Hoffman's Method of Testing for Albumen in the Urine.*—The method consists in the use of papers dipped into a mixed solution of perchloride of mercury and iodide of potassium. When a strip of this prepared paper is plunged into urine containing albumen, the latter is at once precipitated. The formulæ published in the *Pratique Médicale* are altogether misleading. The urine must be strongly acid or the urea will be precipitated by the double iodide of mercury and potassium. After a number of experiments, M. Carette has arrived at the following formulæ and procedure:—℞ Hyd. bichlr., 1 gramme; aqua dest., 20 grammes; fiat solutio. ℞ Pot. iodid. puriss., 2·60 grammes; aqua dest., 5 grammes; fiat solutio. Mix these two solutions. The result and liquid should be clear, the precipitate formed at the moment of mixing having cleared up. Dip strips of bibulous paper in the liquid, dry, and cut into strips. Make a saturated solution of citric acid at 15° C., dip into it some bibulous paper, dry, and cut into slips. The urine to be tested must be filtered if not clear; it must be acidified by means of one of the citric acid slips, and when this has been done one of the iodised slips is dropped into it. Urine containing a trace of quinine gives a precipitate like that of albumen, but in that case it clears up on the addition of alcohol or on boiling. Urates in excess also give a precipitate which, however, redissolves on the addition of water. When the urine contains pus, this should be precipitated by acetic acid, and filtered off. The procedure, thus modified, is as follows:—1. Acidulate strongly with acetic acid, and filter if necessary. 2. Plunge the iodo-mercuric strip in the clear urine. 3. If a precipitate results, add alcohol or heat, in order to distinguish from alkaloids and peptones. 4. Add a little water to see if the precipitate redissolves (urea). On the whole, the older methods are infinitely more reliable for ordinary clinical work. Alfred S. Gubb.

1497. *Gautier and Mourgues on the Alkaloids of Cod-liver Oil.*—According to Messrs. Gautier and Mourgues' investigation of the colourless and coloured cod-liver oils, the former contain merely traces of alkaloids (leucomaïnes), the greatest proportions of which are found in the pale-yellow kinds of the oils, which are considered to possess the most active therapeutical properties. The reason why these oils are rich in alkaloids is the following:—The livers, after having been washed and placed in the vats, discharge spontaneously the white or slightly amber-coloured oil, after which a process of fermentation (not putrefaction) commences, by which they become acidified. The oil, by the contact with contents of the hepatic cells, is charged with biliary matter, by which it assumes the characteristic tawny colour, and in this stage dissolves the alkaloids. In order to extract the alkaloids of the cod-liver oil, Messrs. Gautier and Mourgues adopted the following process:—They treat the oil with the equal quantity of alcohol of 33° C. (91°·8 F.), containing 4 grammes (1 drachm) of oxalic acid per litre (2 pounds). The alcoholised fluid is decanted and saturated with nearly the same quantity of chalk, filtered and distilled at 45° C. (130° F.) in the vacuum; the distillate is treated with precipitated lime and saturated with lime-water, evaporated to dryness in the vacuum, and the residue extracted with alcohol of 90° C. (194° F.); the thus obtained alcoholic solution is distilled in the vacuum; a small quantity of water saturated with caustic potash is added to the residue, and the fluid is treated with ether in excess. This ether takes up the alkaloids which are precipitated from the etherised solution by oxalic acid. The oxalates obtained in that manner having been dissolved in water and treated with potash, an oily, brown, thick, very alkaline supernatant substance will form, which is desiccated over molten potash. By this complicated process 25–50 centigrammes (6–8 grains), according to the quality of the oil, of alkaloids per kilogramme (3 pounds) will be obtained. Of these alkaloids some are volatile, others are fixed or barely volatile. The volatile bases can be separated by submitting all the bases to an interrupted distillation in the oil-bath. The bases are:—1. *Butilamine*, which boils at 87–90° C. (188–194° F.); 2. *Amylamine*, boiling at 96–98° C. (173–176° F.); 3. *Hexyglamine*, the boiling point of which is a little above 100° C. (212° F.); 4. *Hydrolutidine* (a new base), with a boiling-point of 198–200° C. (388–390° F.) Among the fixed bases are:—1. *Aselline* (a new base), which forms a chlorhydrate precipitable by exposure to cold; 2. *Morrhuine* (a new base), which forms a very soluble chloroplatinate, crystallising in the lyes of the aselline. Besides, there is a small quantity of *lecithine* and of an acid crystallisable azotile, the *gaduinic acid*, which is at the same time an alkaloid capable of forming crystalline chloroplatinates.

FERD. ADALB. JUNKER, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1498. **MÜRASHKO, DR. S. L.**—Case of Physometra Puerperalis. (*Meditzinskoië Obozrenië*, No. 11, 1888, p. 1066.)

1499. **FOURRIER, DR.**—On Pilocarpine in Puerperal Eclampsia. (*Rev. Gén. de Clinique*, Feb. 28, 1889.)

1500. **GOODELL, DR. WILLIAM.**—On Tubal Disease as a Primary Cause of Intestinal Obstruction. (*Obstet. Gaz.*, January 1889.)

1501. **BRADFORD, DR. T. H.**—On Gynæcological Cases treated by Electricity. (*Obst. Guz.*, January 1889.)

1502. **MANN, DR. MATTHEW D.** (Buffalo).—Specimen of Ovarian Pregnancy. (*Trans. Amer. Gynæcol. Soc.*, vol. xiii., 1888.)

1503. **HOMANS, DR. JOHN.**—A Case of Semi-solid Tumour of the Right Ovary. (*Boston Med. and Surg. Jour.*, Jan. 24, 1889.)

1504. **LINDFORS, DR. A. O.**—The Operative Treatment of Suppurating Uterine Fibroids. (*Centralbl. für Gynäk.*, No. 6, 1889.)

1505. **TAIT, LAWSON, F.R.C.S.**—Uterine Myoma. (*Birmingham Med. Review*, March 1889, p. 129.)

1506. **MOSETIG.**—Myofibroma of the Uterus. (*Rif. Med.*, p. 1721, 1888; and *Gior. Internaz. d. Sci. Med.*, January 1889.)

ART. 1498. *Mürashko on Puerperal Physomètra.* In the *Meditzinskoië Obozrenië*, No. 11, 1888, p. 1066, Dr. S. L. Mürashko, house-physician to the Voronej Zemsky Hospital, details the following exceedingly curious and rare case referring to an undersized and delicate peasant woman, aged 36, who had had five normal labours, and became pregnant for the sixth time. The pregnancy had not presented anything abnormal beyond an unusual enlargement of the abdomen. The labour pains set in at full term, and were at first strong, but, after the rupture of the fœtal membranes, gradually ceased altogether. Several ignorant rustic midwives assiduously tried to drag out the fœtus by all possible internal and external manipulations, but, having failed to accomplish the thing, were compelled ultimately to send the unfortunate parturient to the hospital (ten miles' distance). When admitted, about sixty hours since the commencement of labour, the patient was suffering from serious prostration with fever (39°·2 C.). Her abdomen was very tense, its middle being occupied by a cigar-shaped womb reaching up to the xyphoid cartilage. Percussion over the uterine fundus elicited a drum-like tone, passing into a dull one towards the lower segment. The external genital organs were pale and highly tumefied, the genital slit gaping and tightly plugged with œdematous and macerated integuments of the (immovably impacted) fœtal head. The fœtus was dead. Having failed to apply forceps, Dr. Mürashko managed to introduce his forefinger into the infant's mouth and to extract the head. Then he proceeded to free the right shoulder, but 'scarcely had the latter presented itself in the genital slit when the whole fœtus was momentarily ejected from the vagina with striking force, like a cork from a bottle containing some effervescent fluid.' The expulsion was accompanied by the escape of a large quantity of offensive gases with an as offensive dark-brown gruel-like matter. The womb collapsed, but remained in a wholly relaxed condition. The placenta was without delay removed from the uterine cavity with the hand. It proved to be in the state of a highly fœtid putrefaction. A profuse bleeding followed, to persist notwithstanding a continuous uterine massage and the administration of ergot. In about six hours, however, the womb at length firmly contracted and hæmorrhage ceased. On the next day a superficial gangrene of the major labia developed itself, and a deeper one of the minor. On the 4th, incontinence of urine supervened, the latter escaping not only from the urethra, but also from the vagina. About the 8th, the sloughs (including larger halves of the minor labia) fell away; at the same time, a fairly large piece of dead tissue was washed out from the vagina. The lochia, however, were free from any bad odour, and the patient's general state was perfectly satisfactory. A detailed examination of the vesico-vaginal fistula was postponed until there was complete healing of the external lesions, but the woman flatly refused to stay any longer, and was accordingly discharged on the tenth day. The author dwells on the following points :—1. The case is undoubtedly that of uterine tympanitis developed during parturition, since there were present all characteristic features of the condition, such as an unusual elongation and a peculiar shape of the womb, drum-like sound over the fundus, a hermetical impaction of the fœtus, escape of offensive gases following a violent expulsion, &c. 2. The course of events was, highly probably, as follows. During the pregnancy, the uterus became distended with an abnormally profuse quantity of the amniotic fluid. When the labour came and the womb was emptied of the fluid, the over-distended organ could contract but very feebly. The prolonged and rough manipulations of the midwives introduced septic matters into the genital tract, and at the same time gave rise to an irritation of the lower uterine segment with a consecutive spasmodic contraction about the internal os. The contraction completely immobolised the fœtus, and hermetically closed the cavity. The placenta (and, possibly, blood-clots) becoming putrefied, a great accumulation of pent-up gases necessarily took place.

V. Idelson, M.D.

1499. *Fourrier on Pilocarpine in Puerperal Eclampsia.*—The author was called at midnight, on Nov. 24 last, to a woman in labour who had been seized with convulsions. He found her suffering from eclamptic attacks. She was 21 years of age, primipara, and at term. She had been in good health while pregnant until a month before, when her legs had become swollen, and her mental faculties had become obscured. The pains began at 7 P.M. The *os uteri* was dilated to the size of a sixpenny-piece, and the head presented with the occiput to the right and behind. He at once bled the patient (400 grammes), but consciousness did not return. She had a third attack at 1.30, and he administered chloroform. He effected delivery at 5 A.M. with the forceps. Half an hour after the removal of the placenta the attacks recommenced, and he again bled the patient. Later on in the morning the attacks set in once more, and did not subside even under chloroform. At 2 P.M. her condition was critical, she was cyanosed and pulseless, the extremities were cold, and death appeared to be imminent. He then injected subcutaneously 2 centigrammes (⅓ grain) of nitrate of pilocarpin. The effect was magical. Ten minutes after the injection an abundant diaphoresis set in, lasting for over half an hour. The pulse became perceptible, and no further attack occurred. A second injection was given in the evening. Her urine was then still highly laden with albumen. On the following day two more injections were made, and in the evening the patient recovered consciousness. A last injection was given the next day, and from that time the patient progressed as favourably as could be wished. A month later the albumen had altogether disappeared from the urine and recovery was complete.

1500. *Goodell on Tubal Disease as a Primary Cause of Intestinal Obstruction.*—The author called attention to the frequency with which he has found adhesions between the uterine appendages and some part of the intestines, and the importance of recognising the danger of intestinal obstruction due to inflammatory conditions of the pelvic viscera. He points out that the inflamed serous surface of the diseased tube or ovary, coming into contact with a loop of intestine or an edge of omentum, provokes inflammation there, and the adjacent surfaces then promptly contract adhesions. In slight cases these adhesions may be absorbed, but if severe or chronic they gain in extent and strength until they give rise to the condition classified by Treves as 'strangulation by bands.' In most of such cases there is a history of constipation, due partly to pain on defecation and partly to mechanical reasons. The pain, however, does not bear any proportion to the mischief, a very small adhesion sometimes giving rise to agonising pain. It is by no means rare to find the vermiform appendix glued fast to the uterine appendages, while almost any loop of the small intestine may become adherent to the inflamed pelvic viscera. The fact that such adhesions do not invariably cause complete occlusion is no reason for regarding them lightly, and it is always desirable, on general principles, to insist on the release of the intestine whenever and to whatsoever extent adhesions exist, otherwise the patient is left exposed to the risk of future serious trouble. He believes that some of the deaths from intestinal obstruction, after operation, are due to leaving old bowel adhesions undisturbed.

1501. *Bradford on Gynæcological Cases treated by Electricity.*—The author reports the following cases as having been treated in the Gynæcological Out-patients' Department of the Pennsylvania Hospital by means of electricity. Case 1.—Stenosis of cervix, patient æt. 30, current strength 80 milliampères for four minutes, repeated six times; relieved dysmenorrhœa. Case 2.—Anteflexion, aged 21, single; after a month's treatment uterus retained in normal position. Cases 3 and 4.—Metrorrhagia, æt. 22 and 45; current strength from 80 to 200 milliampères; cure in both cases; first case three weeks, second three months. Case 5.—Dysmenorrhœa, æt. 32; cure in a month, with 70 milliampères. Case 6.—Subinvolution, æt. 37; current 125 milliampères; cured in three weeks. Case 7.—Prolapse of half-ovary with adhesions, æt. 26; current 40 milliampères; six weeks under treatment, result doubtful. Case 8.—Submucous myoma, æt. 38; still under treatment. Case 9.—Intramural fibroid, æt. 24; still under treatment. Case 10.—Intramural and subperitoneal fibroid, æt. 38; still under treatment.

Alfred S. Gubb.

1502. *Mann on a Case of Ovarian Pregnancy.*—Dr. Mann describes a case 'which,' in his opinion, 'seems to come very near settling this question, if there was any doubt in regard to it before.' The question was, of course, the existence of ovarian pregnancy. There was little or no history to the case, the woman having died of some unrecognised disease. After death, a cyst was found in place of one ovary, the tubes being intact. When the specimen was taken from the body, the cyst appeared to be perfectly transparent. Dr. Freeman, of Smythport, Pennsylvania, could see through the walls and distinctly detect a fœtus. By accident it was put in a pan of water and frozen, and afterwards boiled by mistake. Then it was left for a year in a weak solution of spirit 'scarcely strong enough to preserve it.' When the specimen came into Dr. Mann's possession (thus all the previous history was second-hand) he found that the sac contained a milky fluid which looked like thin boiled starch. A circular, flattened disc was attached to the inner surface of the sac; this disc Dr. Mann 'took to be the placenta.' He continues: 'No fœtus was to be found, although the doctor said that the fœtus was unquestionably there when he first saw it.' Dr. Mann thought that it was so young that it was melted by the *post mortem* changes which took place. The disc was 'partially decomposed,' but 'undoubtedly placental tissue.' In the discussion which followed the reading of Dr. Mann's paper, Dr. A. W. Johnstone, of Danville, Kentucky, expressed his belief that the cyst was dermoid, and, on the well-known Poupinel-Sutton doctrine that we may 'expect almost anything in a dermoid cyst,' suggested that placental tissue might be found in a tumour of that kind. Dr. Coe doubted this suggestion and, quite rightly, observed that the question depended on a microscopical examination. [The able editor of the *American System of Gynæcology* will hardly convince sceptics by his report of this remarkable case. He taunts 'many would-be authorities' who state that all ectopic gestations are primarily in the tubes. In justice to Mr. Lawson Tait, the strongest advocate of this doctrine, it should be noted that he does not absolutely deny the possibility of ovarian pregnancy. 'If it does occur,' he says in his *Lectures on Ectopic Pregnancy and Pelvic Hæmatocele*, 'it must be rare, and will be curious. If it never occurs, so much the better.' Spiegelberg's conclusions, quoted by Dr. Mann, are ably discussed by Tait, and he shows that in none of the cases of alleged ovarian pregnancy related and analysed by the German authority, is the evidence that gestation was primarily ovarian in any way conclusive. Once more it must be noted that the evidence of the existence of a fœtus was second-hand. The original observer may have had small experience in research of this kind, and a lump of mucoid tissue might easily have been taken for a very early embryo. Above all, he never opened the sac. Strange, too, is the patient's death 'of some unrecognised disease.' Death in the early stages of ectopic pregnancy is generally associated with very definite and well-known appearances, of which we have no account in this case. Dr. Johnstone's suggestion was at least reasonable; dermoid cysts may contain cavernous tissue closely imitating placenta. As for advanced cases, the normal relations are so much effaced as to make it impossible to prove the original seat of gestation. In its early stage, tubal pregnancy can be seen. It requires no evidence, any more than a man requires evidence of the existence of the sea when he is on the West Pier at Brighton. The possibility of ovarian pregnancy is almost always asserted on evidence rather than on direct demonstration. Dr. Mann claims, however, to have demonstrated an ovarian pregnancy itself. The flaws in this professed demonstration have just been noted. We cannot absolutely deny that Dr. Mann's case was ovarian, but we are not convinced. We trust that he will write a fuller account with drawings. Unfortunately the chief witness, the fœtus, is not to be found.—*Rep.*]

1503. *Homans on an Ovarian Tumour simulating Uterine Fibroid, with Observations on Listerism.*—A widow, aged 36, living in the Southern United States, had married and borne one child when a very young girl. For four years she had been subject to a tumour resembling a uterine fibroid. For a time hypodermic injections of ergot 'had produced a decided shrinkage of its area,' but it soon began to grow again. In November 1887 she came under Dr. Homans's care. A hard, lobulated tumour occupied the lower part of the abdomen, extending above the umbilicus. There was complete prolapse of the uterus, which lay between the patient's thighs, and there was of course very marked prolapse of the vaginal walls. On reducing the uterus, it was found to have apparently no connection with the tumour which pressed into Douglas's pouch. On December 16, 1887, an exploratory operation was performed. A Tait's screw was thrust into the tumour, but it would not hold; and in the wound made by the screw ovarian tissue was discovered. There were omental and pelvic adhesions. The pelvic part of the tumour 'had gradually pushed the uterus and vagina out as it had slowly increased in size.' At the close of the operation the external genitals appeared normal, and there was no protrusion of deeper parts. 'On examination of the tumour only one cyst, as large as a lemon, was found; all the others varied from the size of a pin's head to that of a filbert.' It weighed eleven pounds, and its structure was in parts very dense. No account of any microscopic examination of the tumour was given by Dr. Homans, who stated that he had operated already on two cases of 'fibroid tumour of the ovary.' The evidence about the effect of ergot is interesting, if reliable; but the sound entered the uterus three and a half inches, so that the drug might have acted rather on that organ than on the ovarian growth, the latter being indirectly influenced through its circulation. [A paper by the reporter on uterine and ovarian myoma and fibroma is published in the *Trans. Obstet. Soc.*, vol. xxx., 1888. Many ovarian 'fibroids' are at least partly myomatous.—*Rep.*] Dr. Homans's case did well until attempts were made to move the bowels. Vomiting and pain without distension, tenderness, or rise of temperature and pulse continued more or less for ten days. On January 5, 1888, twenty days after the operation, the first satisfactory movement of the bowels followed the taking of ten grains of calomel in five two-grain doses. She afterwards made a good recovery. Dr. Homans abandoned the use of the carbolic spray on October 24, 1887, after using it continuously for ten years. Subsequent results have been as good as before. During the past three months he had done thirteen ovariotomies, and all recovered. Dr. Homans nevertheless considers that abdominal surgery owes much to Lister. 'All of us *believed* in cleanliness before Lister, but it was his mission to so impress the necessity of it upon the world that we should all *practise* it.'

1504. *Lindfors on the Removal of a Suppurating Fibroid Polypus.*—Dr. Lindfors, of Lund, Sweden, made a journey of several miles in mid-winter, in order to see a woman, aged 44, whose uterus had suddenly come down, according to report. The patient's room was horribly fœtid. A mass, the size of a fœtal head, projected from the vulva. It was of a deep purple colour, with black spots, and bathed in fœtid sanious pus. The patient had lain for two days in this condition, and was feverish and much reduced in strength. After careful cleansing, bimanual examination was made. The mass was a submucous fibro-myoma, with a pedicle 'as thick as a man's arm at the wrist.' It had caused partial inversion of the uterus; the fundus was concave. Dr. Lindfors had nothing available except the instruments in his pocket-case, but he thought it wise and safe to operate at once, as there would be risk in sending the patient in a waggon to the hospital at Lund. He tied a silk ligature round the pedicle, which he then cut through with scissors. The stump retracted up the vagina, and the uterus appears to have reduced itself. The patient was nursed by her daughter, who freely irrigated the parts with carbolic injections. She made a good recovery. Five months later no trace of the tumour could be detected; the cervix and body of the uterus were normal, and menstruation was regular. [Dr. Matthews Duncan and many other British authorities consider that simple division of the pedicle, even in very large fibroid polypi, is the simplest and best form of treatment. The great retraction of the stump prevents hæmorrhage. The reporter has seen death ensue after the removal of a small polypus, where a large myoma of the uterus also existed.—*Rep.*]

1505. *Lawson Tait on Removal of the Ovaries for the Cure of Myoma.*—The death of two enucleation cases in one week, eighteen years ago, caused Mr. Tait to reflect on the peril of enucleating uterine fibroids. The great size of the tubes and ovaries in these cases suggested some relation of abnormal conditions of the appendages to fibroid disease of the uterus. Mr. Tait had already performed double ovariotomy on a woman blanched by uterine hæmorrhage; that serious symptom at once ceased completely. In July 1872, he removed the appendages in a case of bleeding fibroid. In a few months the hæmorrhage ceased, and the patient is now alive and well. Since that operation, Mr. Tait has removed the appendages 272 times, with 12 deaths, giving a total average mortality of 4·41 per cent. From July 21, 1885, to the present time, he has operated 154 times with only two deaths. The operator maintains, as he did in January 1882, that as far as its primary results are concerned, removal of the uterine appendages, for the arrest of intractable uterine hæmorrhage, is a procedure which is as easily justified as any of the major operations of surgery. He is satisfied with the secondary results. Of the fifty cases recorded in 1882 only two have proved through their after-history to be failures. In one of the latter, the tumour was a soft œdematous myoma. The appendages on the right side (for the tumour was removed three years and a half after the left appendages had been amputated) were found on careful dissection to be congenitally deficient. The left appendages had not been thoroughly removed. In Mr. Tait's whole series, six cases, where the tumour was a soft œdematous myoma, received no benefit from oöphorectomy. In the entire series of 262 cases of uterine myoma, where the operator has removed the appendages, between December 1880, and February 1889 (thus excluding 10 cases performed between 1872 and 1880), 4 died. Of the series, 1 case was under 20; 29 cases were between 20 and 30; 113 between 30 and 40; 113 also, between 40 and 50; and 6 were 50, or older. In 2 cases, the tumours were reduced in size, but hæmorrhage recurred through the presence of a small polypus; on removal of that growth it ceased. Alban Doran.

1506. *Mosetig on Myofibroma of the Uterus.*—The patient, in February 1887, first complained of pressure in the pelvis, with sharp sacral pains, and difficulty of passing water; then followed attacks of metrorrhagia, which ceased after three months. On examining her, Mosetig found a lobulated tumour filling the pelvis and reaching above to within two fingers' breadth of the umbilicus. One of the lobes extended to the vagina. The tumour appeared slightly movable laterally, but was otherwise fixed. The cervix was unaltered, save for flattening of the os antero-posteriorly. Although the case did not seem a fit one for operation, Mosetig was induced, at the patient's request, to make an exploratory laparotomy. This was done on May 9, 1881. When the tumour was exposed, it was found to be immovable, and to occupy the hollow of the sacrum. During examination it became so hyperæmic that some small vessels gave way. Completion of the operation being considered impossible, the abdominal wound was closed. The sutures were removed on the eighth day, and in fourteen days the patient had completely recovered from the effects of the operation. Meanwhile the patient said that she felt much better, and the pains had disappeared. A fortnight later Mosetig examined the patient, and found, to his surprise, that the tumour was reduced by about half. The lobe extending to the vagina had disappeared, the uterus had become movable, the difficulty of micturition had ceased, and the bowels acted regularly. After another week the tumour had become more movable still. 'All this reminds one of what happens when a soft sarcoma disappears under the influence of erysipelas. It is known that in man fibromas of the base of the brain disappear sometimes at puberty, but in the case of tumours of the uterus, it is only known that they sometimes become arrested in development at the menopause, and remain stationary.' Their complete and spontaneous disappearance seems to Mosetig a fresh fact, and he thinks it is, in part at least, to be attributed to the operation. The great hyperæmia under examination, mentioned above, acting in the same way as an attack of erysipelas. [To the reporter both this explanation and the diagnosis seem a little doubtful.]

G. D'Arcy Adams, M.D.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

1507. Duhrandy, Dr.—On Chronic Arsenical Poisoning. (*Rev. Gén. de Clin. et de Thérap.*, Jan. 31, 1889)

1508. Zambianchi, V. T.—A Case of Poisoning by Cocain. (*Gazz. degli Ospitali*, 93, 1888; and *Gior. Internaz. d. Sci. Med.*, Fasc. i., 1889.)

1509. Gibson.—Strychnine as an Antidote in Narcotic Poisoning. (*Practitioner*, December 1888, p. 401.)

1510. Stewart, Dr. David Denison.—Poisoning by Chrome Yellow, used as a Cake Dye. (*Medical News*, Jan. 26.)

1511. Ward.—On Criminal Abortion by Inflation of the Uterus with Air. (*Albany Medical Annals*, January.)

Art. 1507. *Duhrandy on Chronic Arsenical Poisoning.*—In a contribution bearing on the wholesale arsenical poisoning which occurred last year at Hyères (France) in consequence of the accidental substitution of white arsenic for gypsum in wine, the author summarises the general effect observed among the victims of the error. Upwards of 400 suffered to a greater or lesser extent and several cases proved fatal. *A. Digestive Apparatus.*—Gastric derangement was the first symptom in every case, many patients suffered from nausea, vomiting and diarrhœa, but in most instances these soon passed off, a sort of tolerance being established. Their duration varied from one to four days. In other cases dryness of the mouth and fauces, or ptyalism with retro-sternal and epigastric constriction, were complained of, though seldom to such an extent as to necessitate recourse to a medical man. *B. Respiration.*—Acute bronchial catarrh was an early symptom with many of the patients, following the digestive disorders. It was more persistent and constituted a sort of second stage of the toxic phenomena. The symptoms, as a whole, bore much resemblance to ordinary influenza, but the secretion was less abundant and there was marked motor and sensory disorder (lassitude, prostration, tingling, &c.) *C. Muscular System.*—The muscular weakness varied in intensity from simple weakness of the muscles of locomotion to complete paresis. This, however, was not due to paralysis but to lack of nervous energy. Some patients, nevertheless, exhibited paralytic symptoms of an ephemeral nature. The patellar reflexes were diminished or abolished, and this still persists in certain of the victims. *D. Sensory.*—The disorders of sensibility were universal though of variable intensity. They were exceedingly obnoxious to treatment, and consisted in tingling (*fourmillement*) in the extremities with loss of tactile sensation and pain. The pain complained of was headache, pleurodynia, shooting pains in the limbs, &c. The latter were, in some instances, so severe as to prevent sleep. Many complained of a sensation of heat internally, especially distressing at night. Tactile sensation was sometimes dulled, sometimes hyper-acute, at others a blend of the two. The special senses were less frequently affected, but in some cases deafness, with or without noises in the ears, was complained of. In two instances, fœtid sweats were noted. ALFRED S. GUBB.

1508. *Zambianchi on a Case of Poisoning by Cocain.*—A lady who had been twice operated on for cancerous nodules of the breast, came under the care of Dr. Zambianchi, as operation was again necessitated by the recurrence of the disease in the skin of the thorax and in the axillary glands. The patient was in fair health, and her heart sound. A solution of 5 per cent. of cocain was prepared, and of this 4½ Pravaz syringesful (0·225 of cocain) were injected. Epileptiform convulsions immediately resulted, and lasted fifteen minutes. Artificial respiration was resorted to, and the patient seemed coming to. Convulsions, however, again supervened, and in five minutes the patient was dead. In *Lo Sperimentale*, September 1888, another fatal case was reported. A lady swallowed by mistake 5 grammes of a 30 per cent. solution (= 1·50 gramme cocain). After fifteen minutes she became uncomfortable, felt as if she was choking, retched, and shivered. She was put to bed and wrapped in warm blankets. Became delirious. The doctor was called, and, on arriving, found her unconscious, pulseless, with pale face, dilated pupils, lips cyanotic. At the autopsy the brain, cord, stomach, and intestines were found intensely hyperæmic. In the left lung were recent hæmorrhagic infarcts. Dr. Montalti, who made the *post mortem*, however, affirms that a dose of 1½ gramme of hydrochlorate of cocain is not necessarily fatal, and mentions a case of Professor Semmola's, in which a chemist took 2 grammes and recovered. Erlenmeyer also narrates a case in which 3 grammes were taken, the patient recovering. In the *Centralbl. für Chirurg.*, p. 628, 1888, a case is given in which 23 milligrammes were injected, for the removal of a small tumour in front of the right ear in a young man of 23. Within thirty seconds the patient became alarmingly weak, and shivered; pulse 140, cold sweat, collapse. Stimulants were freely given; after a quarter of an hour he began to rally, and finally recovered. Another fatal case is that of Dr. S. P. Colomnin's, professor of clinical surgery in the Military Academy of St. Petersburg, who was so overcome by his misfortune that he killed himself with his revolver. Wishing to scrape and cauterise a large rectal ulcer in a lady, he injected at four intervals a solution containing 1·50 gramme of hydrochlorate of cocain. Complete anæsthesia was not obtained. Immediately after the operation the pulse was frequent. After three quarters of an hour Professor Colomnin was called, and found the patient very weak, with difficult respiration, hands and feet cyanotic. All the means adopted, including tracheotomy and inhalations of oxygen, could not prevent a fatal termination. Dieulafoy before this, in a quite similar case, injected at one time 3 grammes, with the best results. Dr. Morelli, the reporter of these cases in the *Giornale Internazionale*, suggests, to explain this diversity of results, that besides individual peculiarity, the cost of the remedy leading to its great adulteration must be considered. In the clinic of Professor Gallozzi, cocain has been much used in lithotrity, 1 gramme in solution being injected into the bladder with excellent results.

G. D'ARCY ADAMS, M.D.

1509. *Gibson on Strychnine as an Antidote in Narcotic Poisoning.*—In the *Practitioner*, December 1888, p. 401, Dr. Gibson calls attention to the value of strychnine as an antidote in narcotic poisoning. It is everywhere recognised that narcotic drugs in lethal doses cause death through paralysis of the respiratory centre, and it appears difficult to account for the fact that strychnine, the most powerful stimulant to that centre, should not be used always as an antidote for all narcotic poisons. At present *atropine* is allowed to hold this position, but there is a stage in opium poisoning at which the use of this drug is fraught with danger, and a patient may pass away in a condition of profound narcosis in which the action of atropine predominates over that of the original poison. During the last three years the author has employed strychnine hypodermically when there has been any irregularity or interruption of the breathing, which appeared to threaten a failure of the respiratory centre. The effect of the drug is immediately shown by the increased rate, more regular rhythm, and greater depth of the respiration, and, even in cases where the breathing has ceased, it has again commenced after the administration of the strychnine. The tabloids of strychnine, introduced by Messrs. Burroughs, Wellcome, & Co., are the most convenient form to keep for immediate use. Dr. Gibson does not approve of the plan of walking patients up and down the room when poisoned by opium, for by this act the vital powers are exhausted; he suggests that strong mustard poultices to the calves, the use of an interrupted current, together with the help of pinching the arms and legs, is a much more sensible plan for keeping the patient awake. Another method commonly adopted in these cases, and strongly condemned by the author is the administration of alcoholic stimulants; these aid the action of narcotics, and should never be given. Keeping the patient in a horizontal position is of great importance, and the respiration should be carefully watched; if there should be any irregularity in the breathing, then one-hundredth or one-fiftieth of a grain of strychnine should be injected at once, and this dose may be repeated, if necessary, every hour for two or three hours. If, in spite of this treatment, the respiration fails, then artificial respiration must be resorted to, and must not be relinquished until the respiration is carried on by natural means, or, on the other hand, until the heart has ceased beating for half an hour. If the circulation threatens to fail in consequence of the poison affecting the motor mechanism, or of spasm of the arterioles caused by deficient oxygenation of the blood, then some ammonia or ether must be used with the strychnine, and if there be severe spasm it may be relieved by the use of nitrite of amyl. Strychnine will also be found useful in the treatment of cases of failure of the respiratory centre during the administration of anæsthetics.

RICHARD NEALE, M.D.

1510. *Stewart on Poisoning by Chrome Yellow, used as a Cake Dye.*—In the *Medical News* for Jan. 26 is a paper read by Dr. Stewart on the above subject before the Philadelphia County Medical Society in continuation of a former one on the same subject. He had the good fortune to have the opportunity of studying an outbreak of lead poisoning consequent on the habit a certain baker had obtained of using chrome yellow as a dye for buns and cakes. He records the two following cases at some length. Mrs. H. H., a widow, aged 47, commenced to have attacks of lead colic in the early part of 1886, and continued to be subject to them till the summer of 1887. She also suffered from severe headache and constant mental and physical exhaustion; slight pains in the ankles, unaccompanied by any inflammatory condition, but with sensations of numbness and burning in the soles of the feet, were occasionally felt. When first seen in June 1887 she had been eating the poisoned cakes almost daily for fifteen months. She was then emaciated and dyspeptic, had palpitation and shortness of breath on exertion and pain in the præcordial region. There was increased arterial tension and an over-acting heart, but no murmur. Lead was found in the urine. In the following August coarse tremor, involving the head and limbs, appeared; the shaking began each morning on rising and continued throughout the day; decided weakness of grasp accompanied it, but no paralysis. She suffered much from palpitations, and soon after hypertrophy of the left ventricle was recognised; no murmur was, however, audible until about the middle of October. Shortly afterwards the urine became albuminous and contained hyaline and granular casts. The mitral murmur became louder and was heard over a larger area; the heart became dilated; the dyspnœa was worse at night; there were cough and frequent expectoration of blood; the ankles and feet were at first puffy and then swollen; purpuric spots appeared on the legs; there was gastro-intestinal catarrh and slight jaundice. These signs persisted until the spring of 1888, when she began to mend steadily, the albumen and casts disappeared from the urine, the tremor became much less, the murmur remained, but she suffered less from heart dilatation. The second case was that of a woman, aged 69, one of a family of seven who suffered from poisoning. She had eaten the chrome yellow buns for nearly a year before other symptoms than cachexia, constipation, arthralgia, and slight colic appeared. In June 1886 she was seized with recurrent attacks of colic, lasting four to ten days, with intervals of about one week, during which slighter abdominal cramps, nausea, vomiting, and constipation persisted. Besides the colic she had generalised headache and neuralgic pains in the joints and limbs; she lost flesh and strength, was depressed mentally, and sleepless. Tremor of the right hand and fingers was first noticed early in October; it was then slight and inconstant, and appeared usually after mental or physical fatigue, but ceased on voluntary effort, by exercise of the will, and during sleep. She had never had tremor before, and there was no family history of neurosis. A year later she was dyspeptic and constipated, and had a marked blue line with retracted gums and discoloured teeth; her skin was earthy yellow, her conjunctivæ jaundiced; she suffered much from headache. The tremor, which commenced in the right hand, had rapidly increased and spread; by the third month the foot and leg were affected, and by the seventh fine tremor had appeared in the left lower limb. There was almost constant coarse tremor of the right hand. All efforts of the will rather increased it than not; it ceased during sleep. Her handwriting was suggestive. There was some rigidity both in the arms and legs and in the anterior cervical muscles, causing the head to be inclined a little forward. Voluntary movement was slow; her speech was not monotonous; the knee-jerks were exaggerated; there was no ankle clonus. Lead was found in her urine in the early stages of the malady. Dr. Stewart is of opinion that the paralysis agitans in this case is attributable to the lead-poisoning.

1511. *Ward on Criminal Abortion by Inflation of the Uterus with Air.*—In the *Albany Medical Annals* for January, Dr. S. B. Ward reports a case in which a prisoner was indicted for manslaughter under somewhat unusual circumstances. It appeared that the prisoner had gone to a medical man, telling him that a woman with whom he was living and who was three months pregnant had a few minutes previously introduced into her uterus a rubber catheter into which he had then blown air, that she had uttered a cry and become unconscious. The doctor at once went to the house, and found the patient unconscious and pulseless, the heart-beat very faint and irregular, the forehead and extremities covered with a cold perspiration, the respiration weak and sighing. She died in about half an hour. The *post mortem* examination was made by two physicians upon the coroner's order. There were no external signs of violence, no evidence of poisoning, and no signs of decomposition. The cavities on the right side of the heart were empty, containing no frothy blood; the left side of the heart was also empty. The lungs were congested. The uterus contained a fœtus nearly four inches in length. The uterus was distended with air; the ovum was intact; the placenta not yet well formed, its adhesion to the wall entirely intact. On opening the uterus air escaped, and two or three ecchymotic spots, the size of a silver ten-cent piece, were observed; but at no point was the mucous membrane of the uterus lacerated. The other viscera were healthy. Dr. Ward, who gave evidence at the trial, expressed his belief that the woman had died from shock—the result of the introduction of the catheter into the uterus, and its subsequent forcible dilatation with air. The suggestion was made for the defence that this was a case of air-embolism, the air obtaining admission to the venous circulation through the uterine sinuses. This theory Dr. Ward disposes of, partly on the ground that at so early a period of utero-gestation, as there was in this case, the uterine sinuses are not open for the admission of air blown into the uterus unless the placenta is forcibly torn away from its attachments, and this had not happened in the case in question; and partly because in every recorded case of air-embolism the right side of the heart has been found filled with frothy blood mixed with air, which was not found in this case. He thinks it possible that some air was forced through the Fallopian tubes into the general peritoneal cavity, and the condition of shock thereby much increased.

SYPHILOGRAPHY.

RECENT PAPERS.

1512. ROSOLIMOS.—The Treatment of Secondary Syphilitic Affections of the Mouth by Mercurial Injections. (*Annales de Derm. et de Syph.*, Nos. 8 and 9, 1888.)

1513. MOURE.—Indurated Chancre of the Nasal Fossa. (*Revue de Laryngologie*; and *Annales de Derm. et de Syph.*, Nos. 8 and 9, 1888.)

1514. LE ROY.—Early Syphilitic Cerebral Disease. (*Bulletin de la Soc. Anatomique*; and *Annales de Derm. et de Syph.*, Nos. 8 and 9, 1888.)

1515. LEUDET.—Hemiatrophy of the Tongue of Syphilitic Origin. (*Annales des Mal. de l'Oreille et du Larynx*; and *Annales de Derm. et de Syph.*, Nos. 8 and 9, 1888.)

1516. FITZGIBBON.—An Address on Syphilis. Dublin. 1888.

1517. CUTLER.—Gonorrhœal Infection of the Mouth. (*New York Med. Jour.*, Nov. 10, 1888.)

1518. MONEY, A.—Congenital Cerebral Syphilis. (*Lancet*, Feb. 2, 1889.)

1519. PAGET, S.—Congenital Syphilitic Onychia. (*Ibid.*)

1520. WHITE, J. W.—Oöphorectomy in Gonorrhœal Salpingitis. (*Brit. Med. Jour.*, Feb. 9, 1889.)

1521. NAUNYN, PROF.—The Prognosis and Treatment of Syphilitic Diseases of the Nervous System. (xiii. *Wanderversammlung Südwestdeutscher Neurologen zu Freiburg i. B.*, and *Deutsche med. Zeitung*, No. 88, 1888.)

1522. ZEISLER.—A New Method of Treating Gonorrhœa. (*New York Med. Record*, January 1889, p. 64.)

ART. 1512.—*Rosolimos on the Treatment of Secondary Syphilitic Affections of the Mouth by Mercurial Injections.*—M. Rosolimos, of Athens, states that in these affections he has found subcutaneous injections of mercury much more efficacious than administration of the drug by the stomach or by inunction, even when combined with local treatment. For example: of 253 cases, including mucous patches, papules, and fissures of the tongue, mucous patches of the fauces and erosions of the mucous membrane of the cheeks and lips, treated by local applications and by mercury given by the mouth or by inunction, the lesions had either persisted or had relapsed during a period of from five months to two years in 18. In 87 cases the lesions did not disappear until the third month; in 92 they lasted nearly two months; in 47 they got well in from thirty to forty days; and in 9 they disappeared in the second week after their first appearance. On the other hand, 216 cases were treated only by subcutaneous injections of mercury, and in 103 of these the lesions disappeared within a fortnight; in 78 in about three weeks; and 35 cases were still uncured after twenty-five injections—that is, after twenty-five days. In these last, topical applications were combined with subcutaneous injections, and cure then resulted a few days later. From these observations the author concludes that the administration of mercury by subcutaneous injection in such cases is the best mode of procedure, not only because of the greater activity of the drug when thus introduced, but because of the rarity of mercurial stomatitis. The following is the author's plan of treatment in syphilis:—He administers a subcutaneous injection either daily or every other day, according to the tolerance of the patient, until forty or fifty injections have been given. During the first ten days a Pravaz's syringeful of a 1 per cent. solution of corrosive sublimate is used for each injection, and afterwards a similar quantity of a 2 per cent. solution. This treatment is followed by the administration, for two months alternately, of bichromate of potash, according to Guntz's method, and of iodide of potassium. As regards the site for injecting, M. Rosolimos always selects the dorsal region between the lower angle of the scapula and the loin. Injections, in his opinion, should not be made in the lumbar region, nor on the lateral aspects of the trunk, nor over the scapula or vertebral column, for in all these places, according to the author, acute pain is caused, and inflammation may easily follow.

1513. *Moure on a Case of Indurated Chancre of the Right Nasal Fossa.*—In this case a man presented himself with secondary syphilitic symptoms, and 'absolutely characteristic' enlargement of the sub-maxillary glands. The skin of the nose was red and swollen, and inside, on the septum nasi, was a bleeding fungating swelling looking like a malignant growth. Recovery took place under mixed treatment and the local application of resorcine. Contagion was believed to have occurred by means of the finger.

1514. *Le Roy on a Case of Early Cerebral Syphilis.*—A healthy tailor, aged 46, not a drinker, came under the care of M. Mauriac at the Hôpital du Midi in August 1886, with a syphilitic primary sore of the prepuce which was followed by roseola in September and a papular eruption in November. Treatment was carried out almost continuously till February 1887, when severe headache, worse at night, came on. A few days later, impairment of memory, intellect, and speech, developed, with awkwardness in using the hands and feebleness and uncertainty in walking, but no actual inco-ordination of movement. Towards the beginning of March the patient became worse and had an attack of loss of consciousness which lasted several hours. There were no convulsive phenomena. The urine contained a gramme of albumen per litre. There was no œdema of the lower extremities. From March 15 the man could not walk without assistance, and a few days later became unable to stand; speech became more and more difficult, and complete left hemiplegia came on, followed by coma and death in two days. From the beginning of the symptoms the patient had taken either *sirop de Gibert* or 4 grammes (about 60 grains) of iodide of potassium daily. *Post mortem*, the thoracic and abdominal organs were healthy, except the kidneys, which were congested, and at certain points between the convoluted tubules there were some islets of embryonic cells which seemed to indicate the beginning of interstitial nephritis. The skull, the brain, and its membranes, were healthy, the only morbid changes being in the arteries. The internal carotids were slightly thickened and whitish in colour, but permeable ; the right middle cerebral was thickened from its origin, cylindrical, and of a peculiar whitish tint; its principal branches were blocked by solid red clot which completely filled them. The right anterior cerebral was of a similar colour and also blocked by a red clot. There were a few whitish spots on the left middle cerebral, but it was permeable, as was also the left anterior cerebral.

1515. *Leudet on Hemiatrophy of the Tongue of Syphilitic Origin.*—From the following cases M. Leudet is of opinion that hemiatrophy of the tongue should be included among the lesions which may be produced by syphilis. *Case* 1.—A woman, aged 32, was admitted into the Lariboisière Hospital on April 17, 1887. Her history was that she had never been ill until four years ago, when she suffered from weakness of vision and diplopia, with general debility, loss of appetite, and anæmia. Recovery took place in two or three months after a visit to the country, without treatment. Eighteen months ago, when she was confined, pain came on in the right side of the head, and this headache had lasted till two months before admission. The pain came on every afternoon at four o'clock, and lasted till the following morning. For about five months deglutition and mastication had been difficult, but not painful, and the voice had altered and become nasal in character. Two months ago ulcers had appeared on the palate. On admission there were four ulcers on the hard palate ; the largest (the size of a pea) was situated on the left side, near the insertion of the velum ; it was round, with sharply cut perpendicular edges. The other three ulcers were small, and situated behind and in front of the large one. All were painless, except when eating. There was slight deviation of the uvula to the left side. There was no deafness. The right half of the tongue was greatly attenuated, without wrinkling of the mucous membrane ; the tip pointed so much to the right that it came in contact with the commissure of the mouth, hence there was great difficulty in protruding the tongue. Tactile sensibility was retained in both halves, but the sense of taste was much impaired on the atrophied side. There was paralysis of the right vocal cord. There was also rhinitis, which had the characters of tertiary syphilis. The sense of smell had been abolished for several months. Vision was normal. There were no symptoms of tabes, and the patellar reflexes were normal. Under mercury and iodide (*sirop de Gibert*), and afterwards of iodide of potassium alone, the ulcers of the palate and the rhinitis were cured in three weeks. The patient then left the hospital, the tongue and paralysed vocal cord remaining as before. The second case was that of an actor, who had contracted syphilis five years before, and had been incompletely treated. In October 1886 he noticed a difference in the pitch of his voice, which finally became very low. M. Coupard had noted paralysis of abduction in the left vocal cord and atrophy of the left half of the tongue. When M. Leudet saw the patient the atrophy of the left side of the tongue was clearly marked. There were no signs of tabes. The left pupil was smaller than the right, but both contracted equally, and the movements of the eye were normal. M. Leudet also quotes another case, published by Pel, of Amsterdam (*Klinische Wochenschrift*, No. 29, 1887). The patient was a man, aged 34, who suffered from pain in the back of the neck, headache, hemiatrophy of the tongue, paralysis of the left half of the velum, atrophy of the left sterno-mastoid and trapezius muscles, and paralysis of the left recurrent laryngeal nerve, without any signs of tabes. Iodide of potassium quickly relieved the headache and pains in the neck, but not the other symptoms, which the author considered too far advanced to be influenced by drugs. After discussing these cases, in which syphilis appeared to play so prominent a part, M. Leudet reviews the principal cases of lingual hemiatrophy observed up to the present time, and comes to the conclusion that this affection is not exclusively a symptom of tabes, but that it may be, though rarely, a manifestation of syphilis.

1516. *Fitzgibbon on Syphilis.*—Several interesting cases are related in the course of Dr. Fitzgibbon's address, which was delivered before the surgical section of the Royal Academy of Medicine in Ireland. The following case, described as one of 'syphilitic gonorrhœa,' is of interest because of the unusually deep position of the primary induration in the urethra. The patient was a young man who consulted the author for difficulty in passing urine, which he attributed to stricture consequent on a gonorrhœa which he had contracted eight weeks previously, but believed to have been cured. At the membranous portion of the urethra, and a little anterior to it, an induration could be felt for a distance of more than half an inch ; a thin semi-purulent discharge had reappeared, and the glands in the groins had become indurated. A few days later a papular syphilide came out. The induration and stricture disappeared after a few weeks under a mild course of mercury. Another curious case is that of a rich banker who contracted a 'Hunterian chancre' on his lower lip. The author states that 'it subsequently transpired that he had inoculated his lip with his finger when counting a roll of bank-notes which had been recovered from a prostitute who had stolen them from one of his clerks. The woman had concealed the roll after her arrest by putting them into her vagina.' In another case a girl of fourteen unaccountably developed a profuse papular syphilitic eruption. She was found to have an induration on the right thigh. This she said was where the crutch of her saddle had cut her six weeks previously when taking a lesson in a riding school. She afterwards visited a ladies' waiting-room at a railway station, 'and here,' says the author, 'beyond doubt the recent abrasion had become infected by virus upon the seat of the closet.' The address concludes with a plea for renewed legislative interference for the prevention of syphilis. 'It is irrational if persons, who, through no fault of their own, fall victims to small-pox or typhus, can by the force of the law be removed from their homes and isolated from their families, that those who are affected with syphilitic fever should be free to spread this disease unrestricted.'

1517. *Cutler on Gonorrhœal Infection of the Mouth.*—Dr. C. W. Cutler, of New York, reports that a woman, aged 21, came to him with her lips cracked and covered with herpes, and the mucous membrane of the lips and cheeks thickened, red, in places denuded of epithelium, and in small areas covered with false membrane which was easily detached, leaving an excoriated surface. The gums were swollen, retracted from the teeth, and bled easily. The tongue was swollen, very tender, and could only be slightly protruded with pain and effort; the surface was red and glazed, with small superficial ulcers here and there which secreted pus. The soft palate and anterior pillars of the fauces were inflamed, but the parts beyond seemed normal. The false membrane contained micro-organisms resembling the gonococcus, but their identity was not fully established. The secretion from the mouth consisted of mucus, pus-cells, epithelium, and bacteria. The woman was greatly relieved by the application of glycerine and bismuth and the use of a chlorate of potash wash, but she disappeared before she was cured. The history was that ten days before she came under observation she had several times taken a man's penis into her mouth. The man admitted that he had been suffering from gonorrhœa.

1518. *Money on Congenital Cerebral Syphilis.*—Dr. Angel Money exhibited before the Pathological Society specimens from a case of chronic syphilitic meningitis, arteritis, cerebral atrophy, and sclerosis in a boy, aged 4. He was first seen at the age of eleven months, suffering from hydrocephalus. The skull was natiform, the root of the nose depressed, the spleen enlarged, and there were signs of disseminated choroiditis. Syphilitic taint was discovered in every member of the family. The boy improved and seemed to be almost well until, on Aug. 18, 1888, left spastic hemiplegia developed. On Oct. 11 he lost his speech and developed right spastic hemiplegia, and on the 19th he died. At the necropsy, the brain and dura mater were found to be adherent everywhere, but the adhesions could be separated. The arteries were much diseased, as was also the brain-substance. The atrophy and sclerosis were most marked in regions supplied by the diseased arteries. The dura mater was four lines thick in the temporal regions, and resembled a fibroma in structure. The ependyma was granular in appearance, due to the formation of granulations composed of small round nuclei, and the structure was of considerable density. Dr. Money also exhibited the brain of a micro-cephalic child, showing atrophy and sclerosis of the left hemisphere without disease of the arteries or membranes, but yet of syphilitic origin. The child could not stand, or sit, or talk, and all the limbs were weak and spastic, but the left arm least so. Death occurred at the age of sixteen months, and the brain weighed fourteen ounces.

1519. *Paget on Congenital Syphilitic Onychia.*—At a meeting of the Medical Society, on Jan. 28, Mr. Stephen Paget showed a case of disease of the nails in inherited syphilis, similar to that figured by Mr. Hutchinson in his manual on syphilis. All the nails were affected, hands and feet alike. They were thickened, discoloured, pinched, and some were already shed. The posterior part of each nail was of a yellow tint, but there was no discharge from under them, and there were no blisters round them. The child, which was four months old, was the first living one after two miscarriages, and had suffered from sores at the anus, and a papular rash on the chest. There had been snuffles, but no history of sore mouth. A slight attack of pemphigus, with some exfoliation of the skin, had been noticed. The child had rapidly improved under treatment.

1520. *White on Oöphorectomy in Gonorrhœal Salpingitis.*—In concluding a paper on this subject Dr. J. W. White, of Philadelphia, remarks that while awaiting definite microscopic evidence on the subject of gonorrhœa, it should not be forgotten that there are marked differences between gonorrhœa as we observe it clinically, and those diseases known to depend upon a specific poison. It is quite possible, even if gonorrhœa does not depend for its origin primarily or exclusively upon the gonococcus, that under certain circumstances the suppuration which accompanies it may favour the development of these or other forms of bacterial life, which in such cases might greatly increase both its contagious quality and the probability of its rapid extension in the infected person. These cases in women come most naturally under the attention of gynæcologists; but they do not happen with great frequency, and, when they do occur, are by no means always followed by serious and alarming sequelæ. In many such cases rest in bed, elevation of the pelvis, counter-irritation, hot antiseptic vaginal injections and anaphrodisiacs, with arterial sedatives, will result in cure. In some instances gonorrhœa undoubtedly produces consecutively endocervicitis, tubo-ovarian abscesses, and pelvic peritonitis, and necessitates a resort to operation; but these instances are comparatively rare or exceptional. As regards gonorrhœa in the male, Dr. White looks upon it as an entirely local and thoroughly curable disease. The so-called 'latent' gonorrhœa is due to changes in the mucous membrane of the urethra, which, while they may be due to the persistence of a specific microbe, are apparently explicable by other circumstances, namely, the delicacy of the mucous lining of the urethra, and the approximation of its surfaces during the intervals of micturition, the passage of the urine which is liable by changes in its constitution to become an irritant, the congestion due to erection, the effect of gravitation, the excessive blood-supply, and absence of extravascular resistance, stricture, &c.

Arthur Cooper.

1521. *Naunyn on the Prognosis and Treatment of Syphilitic Diseases of the Nervous System.*—In practice it is often of the greatest importance to be able to form a correct prognosis in a case of syphilitic disease, for the carrying out of an energetic and long-continued antisyphilitic cure is no slight matter, and makes great claims on the patience and perseverance of all concerned. From the material afforded by his own cases and others collected from medical literature, Prof. Naunyn has instituted a statistical inquiry on the question of the prognosis of these diseases and comes to the following important conclusions:—The prognosis of syphilitic tabes dorsalis and dementia paralytica is quite independent of the presence or not of syphilis, and mercurial treatment in both is without result. The same is to be said of syphilitic polyneuritis. In one case of symmetrical lateral sclerosis (tabes spastica) in a syphilitic girl, the disappearance of all symptoms followed mercurial inunction; this single case, however, cannot invalidate the general rule. The other cases of syphilis of the central nervous system (tabes dorsalis, dementia paralytica, and polyneuritis therefore not included) yield a far better prognosis; of 88 cases (Naunyn's own) 24 were cured, 49 improved, 10 no result, 5 died in hospital. Of 90 cases, Fournier had 30 cures, 13 improved, 33 no results, 14 deaths. The prognosis depends on (1) age; individuals under 40 give a better prognosis than after that age; (2) the interval occurring between infection and the appearance of the nerve affection; if this is more than 10 years, the prognosis is bad, within the first 10 years the prognosis is little variable; (3) on the interval occurring between the last manifestation of syphilis and the commencement of the nerve trouble; here also the period of 10 years is the maximum; within this time the prognosis remains the same; (4) on the period occurring between the beginning of the affection of the nervous system and the introduction of antisyphilitic treatment; the prognosis is more favourable in those cases which come under treatment in the first 4 weeks of the nerve affection, than in those in which it is begun later. To delay even over a year, after once the first 4 weeks have been allowed to pass unutilised, does not seem further to vitiate the prognosis; (5) on the form of the disease; cases of epilepsy, brain inflammation, and neuritic affections give certainly a better prognosis, than do other forms—monoplegia, hemiplegia, paraplegia; mixed and diffuse forms have the worst prognosis. When a good result, cure or improvement, is obtained, the first symptoms of amendment are never long deferred. In these favourable cases the success of mercurial treatment is seen at the end of the first week, and of iodide of potassium often after 3 or 4 days. If no result is obtained at the end of the first week when potassium iodide is given, or by the end of the second week, if mercury, the prospect of recovery, according to Naunyn's experience, is very gloomy. Therapeutics: energetic inunctions, *i.e.* 30 to 40 inunctions with at least 4 to 5 grammes, increasing even to 8 or 10; rubbing for 15 or 30 minutes by the clock. Careful attention to the mouth, skin (3 baths a week at least), regulation of the bowels, good, strengthening food, residence in hospital, and exercise in the open air. From the beginning 1 to 3 grammes daily of potassium iodide. Duration of the whole treatment, 8 to 10 weeks. Naunyn does not altogether approve of the protracted treatment with small doses of mercury recommended by Fournier. For a year after the inunction cure he gives from time to time potassium iodide to rid the organism of mercury and render it again susceptible to the remedy, and so to be able in case of need to encounter effectively the onset of a relapse. G. D'Arcy Adams, M.D.

1522. *Zeisler on a New Method of Treating Gonorrhœa.*—In the *New York Med. Record*, January 1889, p. 64, Dr. Zeisler contributes an article on the treatment of gonorrhœa. The method consists in introducing dry powders into the male urethra, by means of an instrument consisting of three principal parts, two of which resemble very much the original form of the urethroscope—namely, first a cannula with a cup attached to one end, second, an obturator to facilitate the introduction, and third, a hollow spiral, whose object is to convey the powder through the cannula into the urethra. The cannula has a length of six inches and a diameter of about one-fourth inch. The cup has a capacity for about two drachms of dry powder; a narrow bridge with a set-screw is attached transversely to the cup, in order to fasten the spiral in its proper position. The length of the spiral corresponds exactly to that of the cannula, so as not to protrude beyond the lower end of the same when fully inserted; the upper end of the spiral is formed by a milled head, on the top of which is an arrow, indicating the direction in which the spiral should be turned. Just below the milled head is a groove into which fits the set-screw. Below this groove, to what may be called the neck of the spiral, is attached an agitator, which during the turning continually moves the powder toward the spiral. The mode of operation is as follows:—The patient is directed to evacuate his bladder perfectly; next the urethra is thoroughly washed out with a weak solution of permanganate of potash. Now the urethra is dried as perfectly as possible by gently stroking the penis with a clean towel. The patient is then placed in a recumbent position, and the instrument with the obturator inserted, is lubricated (best with glycerine) and gently introduced into the urethra back to the pars membranacea. The obturator is then withdrawn, and the spiral substituted and fastened by the set-screw into its place. The medicament is now placed into the cup, and by constant turning of the spiral in the direction indicated by the arrow, conveyed through the cannula to the deep urethra. The powder thus becomes deposited in the urethra, and as the instrument is slowly withdrawn the whole urethra is filled with powder. The operation completed, a small quantity of the powder is placed around the meatus to keep the parts as dry as possible, and the patient is ordered to keep the glans covered with dry absorbent cotton. The urethra becomes empty of powder in four or six hours. In the beginning the mildest powders should be used, such as pure boric acid, or the following mixture:—Calomel, one part; bismuth subcarb., two parts; boric acid, twelve parts. With the decrease of inflammatory symptoms the powder can be made more astringent by an addition in proper proportions of alum, subnitrate of bismuth, hydrastine, &c. The effect of the first few powder applications is to deprive the secretion of its purulent character, and to change it to a mucous fluid; a few more treatments will result in rendering the discharge only serous in character, when a mild astringent injection will terminate the course of the disease in a few days. Richard Neale, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

1523. Chibret, Dr.—On the Injection of Antipyrin in Enucleation. (*Recueil d'Oph.*, January 1889.)

1524. Andrews, Joseph, M.D.—Enucleation during Purulent Panophthalmitis. (*New York Med Jour.*, Dec. 29, 1888.)

1525. Rheindorf, Dr. J. (Neuss).—On the Extraction of Cataract. (*Archives of Ophthal.*, December 1888.)

1526. Darier, Dr.—On Sclérite Boutonneuse and its Treatment. (*Arch. d'Ophthal.*, January-February 1889.)

1527. Fürstner, Prof. (Heidelberg).—The Pathology of Papillary Stasis and Optic Atrophy.

1528. Mergl.—Creolin, Iodoform Ointment and Antipyrin in the Treatment of Eye Diseases. (*Centralbl. für Augenheilk.*, September 1888; and *Med. Chirurg. Centralblatt.*, Jan. 11, 1889.)

1529. Santos Fernandez.—Prognosis of Amaurosis from Quinine. (*Cronica Med. Quirurg.*, *Havana*; and *El Siglo Medico*, Feb. 17, 1889.)

Art. 1523. *Chibret on the Injection of Antipyrin in Enucleation.*—The author believes that the pain and hæmorrhage which often follow enucleation can be entirely prevented by injecting beneath the conjunctiva before the operation a solution composed of antipyrin one gramme, hydrochlorate of cocaine 0·2 centigramme, water two grammes. The conjunctiva is first anæsthetised with cocaine, and a few minims of the solution are then injected beneath the conjunctiva at several points, the syringe being carried well back towards the posterior pole. The slight chemosis that follows the injection is said rather to facilitate the operation than otherwise, and it is stated that there is a remarkable freedom from hæmorrhage both at the time of the operation and afterwards, and that the entire absence of clots allows more rapid healing of the wound than generally takes place.

1524. *Andrews on Enucleation during Purulent Panophthalmitis.*—The occasional occurrence of fatal meningitis after enucleation, and the fact that in most of the cases in which this complication has ensued the enucleated eye was, or had been, suppurating, have led many surgeons to avoid enucleation when this condition is present. That this rule is by no means universally followed will be seen by reference to the report of a debate at the Ophthalmological Society on the subject introduced by a most valuable paper by Mr. Nettleship (*Transactions of the Ophthalmological Society*, vi., p. 445). The fact that cases in which no evil results have followed the operation have not been considered of sufficient interest for publication, while all efforts have been made to collect the particulars of all in which meningitis has resulted, has no doubt tended to exaggerate the danger of the operation. The present paper is therefore an important contribution, since it records twelve consecutive cases of enucleation during suppurative panophthalmitis, in none of which did any complication arise. In three cases suppuration was just commencing; in all the others it was well established, and the conjunctival swelling was considerable. In every instance the orbit was washed out with a solution (1-20,000) of biniodide of mercury, and no compression was employed, only a few layers of carbolised gauze being laid over the lids. The author tabulates the published fatal cases of meningitis following enucleation—thirty-six in number—and gives a *résumé* of the debate already referred to. He inclines to the view that the veins constitute the most probable route along which suppuration extends to the meninges, and considers that evisceration, since it leaves the open mouths of the venæ vorticosæ is more likely than enucleation to be followed by septic absorption. This paper should be read in conjunction with one by D'Oench (Knapp's *Archives*, xvi., and *Med. Record*, 1887) 'On 500 Consecutive Enucleations.' In twenty-one of these cases panophthalmitis was present, no antiseptics were employed, and, with the exception of one case of orbital cellulitis, all recovered without any complication.

1525. *Rheindorf on Extraction of Cataract.*—In this paper, which is founded on 273 cases of cataract extraction, the author states that his object is to recall attention to posterior capsulotomy, and to offer a contribution to the subject of antisepsis in ophthalmic surgery. The writer makes a flap a millimètre in height, the puncture and counterpuncture lying in the sclerotic, and the apex in the cornea. He does not use cocaine, since 'it renders the eye very soft, and, although there is less danger of loss of vitreous, the extraction is rendered more difficult, owing to the loss of *vis a tergo*, so that the spoon has to be employed.' After delivery of the lens the cystotome is introduced and drawn across the posterior capsule; it is then pushed back slightly into the eye to disentangle it from the capsule, and withdrawn; if it cannot be thus freed, the capsule is drawn out of the wound and cut off. The writer believes that the presence of the free communication thus established between the aqueous and vitreous chambers prevents irido-cyclitis, and increased tension being set up by the swelling of retained cortex, but, he adds, 'the only reason I ever had for performing posterior capsulotomy was to avoid secondary cataract.' In this he failed, for the number of secondary operations required was not fewer than after the ordinary operation; but he considers, on the whole, that the results have been so satisfactory that he sees no reason to change. We will consider the results in detail presently, but we may say, in passing, that we cannot see that they afford any reasonable ground for satisfaction. As regards antisepsis, the author pins his faith on corrosive sublimate, which he uses in the strength of 1 to 1,000; he has used this in cases in which, owing to the presence of dacryo-cystitis or tinea tarsi, suppuration might be expected to occur, and also in magnet operations, and has never seen corneal opacities caused by it. (This may have some bearing on the question whether such opacities are not due, as has been suggested, to the combined action of cocaine and the sublimate.) If we understand the author aright, he admits that posterior capsulotomy introduces a new danger if perfect antisepsis is not secured, since 'vitreous lying directly in the incision offers a fruitful territory for the propagation of infection as well as an obstacle to cicatrisation, and favours infiltration of the edges of the incision whenever a suitable conjunctival flap has not been obtained.' If we are to judge by Dr. Rheindorf's own results, we cannot admit that he has made out much of a case for this operation. He tabulates the results under four headings:—'Good,' V. over 1-8th; 'satisfactory,' V. 1-8th to 1-14th; 'unsatisfactory,' 1-15th to 1-100th; 'loss,' less than 1-100th. The standard taken as 'good' is decidedly low, we should have taken 6-18ths as the lower limit for this class. The cases are divided into three classes, according to the period during which the operations were performed. During the first period the clinical surroundings were most unfavourable, and the results worse than in the subsequent cases. Unfortunately 203 out of the 273 cases belong to this period. As no regular antiseptic precautions were taken, and as the conditions present were favourable to infection of the wound, it would be hardly fair to count the fourteen cases of suppurative inflammation against the operation; but that three should have been lost from detachment of the retina seems significant, for this is a rare complication in eyes which are healthy with the exception of the cataract, unless a large quantity of vitreous is lost. During the second period the hygienic conditions were good, but otherwise the operations were performed as in the first. In the third period corrosive sublimate was used regularly as an antiseptic. In this group there were forty-three cases. Taking the author's classification, 88·4 per cent. were good, 9·5 per cent. satisfactory, 2·3 per cent. unsatisfactory, and one lost from plastic iritis. Considering the meaning that the author attaches to the terms of this classification we cannot consider that the results are at all satisfactory. The main object in dividing the posterior capsule is to obviate the necessity of secondary operations, yet these were required in over 14 per cent. of the cases. The writer's views on the subject of cocaine are certainly original. That it renders the cornea flaccid is well known; but it is not easy to see why this should render extraction more difficult and necessitate the use of the spoon, and such is certainly not the common experience. On the whole, we should say that the tendency of this paper will be to discredit post-capsulotomy.

1526. *Darier on Sclérite Boutonneuse and its Treatment.*—Under the above title, which we might translate into 'nodular scleritis,' the writer describes a class of case which is tolerably familiar to most, though it is generally classed under phlyctenular ophthalmia or episcleritis, according to its severity. As the writer points out, however, it differs in several points from typical examples of both these affections. Somewhat similar conditions have also been named sclerosing and interstitial scleritis. The cases are described as follows:—In an eye, previously healthy, there is seen at one point on the sclerotic a raised spot, the size of a pin's head; it is the same colour as the rest of the sclerotic, and the conjunctiva glides smoothly over it. As the swelling enlarges, its base becomes injected, large tortuous veins being traceable far back on the globe, and the conjunctiva becomes adherent to the summit. This represents the condition in which the patient is usually first seen, and it to some extent resembles phlyctenular ophthalmia; but the summit of the swelling is not a vesicle as in the latter condition, but a smooth, yellowish-white portion of sclerotic, and the hyperæmia of the base is not the bright red produced by vascularity of the conjunctiva alone, but has a purplish hue, such as we are familiar with in episcleritis. On the other hand, the condition differs from an ordinary episcleritis in that the latter forms a more diffuse swelling, and has no white summit. These nodules are seldom solitary, but usually two or three appear at intervals of a few days. Should one of the nodules be situated near the corneal margin, its base becomes surrounded by a halo of corneal infiltration of pearly whiteness, and this increases *pari passu* with the nodule. Each nodule attains its full development in about three weeks, remains stationary for a variable time, and then gradually subsides, the sclerotic resuming its normal appearance, but traces of the corneal opacity persist. In slight cases the appearance left is as if the sclerotic had slightly encroached upon the cornea. The affection appears to be definitely connected with gouty or rheumatic diathesis, and to show a marked tendency to relapse. The writer has found treatment of very little benefit in these cases; atropine, warm fomentations, local abstraction of blood, the actual cautery, scarification, and massage, having all been found useless. On the whole, the greatest benefit seemed to be obtained from local mercurial friction, combined with scarification on alternate days. In one case in which there was a distinct rheumatic, but not a gouty, history, colchicum appeared to be of decided benefit.

W. Adams Frost.

1527. *Fürstner on the Pathology of Papillary Stasis and Optic Atrophy.*—Leber has stated that certain elements in the neuroglia of the optic nerve must not be looked upon as free nuclei, but as the nuclei of cells, the protoplasm of which forms radiating processes passing into the neuroglia. Kuhnt has since taken the opposite view, and speaks of 'isolated neuroglia-nuclei,' not a very appropriate expression. Both authors remark on the difficulty of studying the neuroglia of the optic nerve. But in the course of disease initial processes occur, which increase two or threefold the size of individual cells, and also their number. The double-staining process facilitates the study of their relationship to the neuroglia and the nervous substance. A case of cerebral tumour, telangeiectatic glioma, in which the usual pressure symptoms were present, gave the author occasion to examine this question. The autopsy showed thickening of both optic nerves, abnormal relaxation of the outer sheath, and sac-like filling of the sub-vaginal space. Sections were stained with rubin and logwood. Between the pial and dural sheaths was an extensive new formation, consisting either of connective-tissue fibres, or of spindle and round cells. Only in the least altered parts of the optic nerve (viz., towards the middle) were the above-mentioned radiating cells found, swollen two or three times their usual bulk; the protoplasm and processes on the one hand, the nuclei on the other being sharply differentiated by the double staining. These cells were almost all connected by one or two broad processes with the adventitia of the vessels; processes of smaller size were lost in the neuroglia, in the neighbouring portion of the cell lay the nucleus, usually excentrically. In some places close to the vessels were found round structures, that on superficial examination might be taken for large, highly granular nuclei, of the size of lymph-corpuscles, but a careful view showed that they were all surrounded by a protoplasmic border, and were therefore true cells. Though some of these showed no processes of any sort, others showed a long process proceeding from the body of the cell, away from the vessel; in some cases several such processes. These cells showed active processes of division. Near them were occasionally seen radiating cells with abundant protoplasm, and three or four nuclei side by side. The hardening in Müller's fluid prevented a complete study of nuclear division-figures, but in the highest probability such were present. Radiating cells are present in a normal optic nerve, and their enormous increase in size and number led to the above pathological appearances. 'Nowhere could I convince myself of the existence of free nuclei, or lymph-corpuscles, or other wandering elements.' It is not probable that the proliferation started exclusively from elements previously present; the cells of the vessel-walls, especially of the adventitia, participated, for division-processes were evident in their nuclei, and in the immediate neighbourhood of the vessels, radiating cells in early stages were found.

E. J. Edwardes, M.D.

1528. *Mergl on Creolin, Iodoform Ointment, and Antipyrin in the Treatment of Eye Diseases.*—Dr. Mergl contributes to the September number of the *Centralbl. für Augenheilk.* a paper, of which the following is a summary:—Creolin was employed in acute and chronic conjunctival catarrh, trachoma, and corneal ulcers, in a solution of 1 per cent. strength. In acute conjunctivitis catarrhalis, the conjunctiva of the under lid was painted twice a day with the 1 per cent. solution of creolin; in most cases the redness and swelling of the conjunctiva disappeared in from one to two days; the secretion lessened, but did not entirely disappear; it is therefore better after two or three days to substitute for it lapis divinus or sulphate of zinc. In chronic conjunctivitis, creolin gave no favourable results. In trachoma, creolin appeared in four cases to act like a true specific; the redness and swelling disappeared in two to four days, the purulent secretion in a week, and the granulations in two to three weeks. In other cases the redness and swelling disappeared, but the granulations did not yield. Lastly, in many cases the affection was exacerbated. Mergl, therefore, now begins the treatment of acute trachoma with creolin; if improvement does not advance, he substitutes for it nitrate of silver or copper. In trachoma, combined with pannus or corneal ulcers, creolin is an excellent remedy; under its influence the ulcers become clean, pannus recedes, and in combination with atropin it heals the ulcers. Although creolin very often brings about the healing of corneal ulcers, it often fails. Here the 10 per cent. iodoform vaselin ointment, recommended by Dr. Kanka, especially in hypopyon, is an invaluable remedy. A piece of gauze smeared with iodoform salve is laid on the closed eye, and fastened by a pressure bandage. Under this dressing the pain becomes less, the ulcers clean, and the hypopyon disappears in two to three days. In the clinic of Dr. Kanka in the last two years, with fifty cases of keratitis with hypopyon, the pus was discharged by paracentesis in two cases only. At the suggestion of Dr. Adolf Aldor antipyrin was employed to clear up cicatrices of the cornea. Since antipyrin causes burning, cocain is dropped in first, and then the cornea dusted with antipyrin (like calomel). After the tears have ceased to run, which happens in a few minutes, the cornea is massaged. The result is very good. In one child, who, after small-pox, had extensive opacity of both corneas, this process was employed, and after three months the child, who before distinguished nothing, could walk alone and see small objects, such as a watch and small coins. A similar result was obtained in two other cases.

1529. *Santos Fernandez on Prognosis of Amaurosis from Quinine.*—Dr. Santos Fernandez thinks that the prognosis in these cases is more unfavourable than is commonly believed. He quotes three cases in support of his opinion. 1. A lady, 38, attacked in February 1876 by pernicious fever, comatose in form. She was given large doses of quinine, and, when the comatose condition passed off, was found to be blind. When seen by Dr. Santos Fernandez a few days after, she had no perception of light, and the pupils did not move when a lighted candle was brought close to them. Ophthalmoscopic examination showed the fundus scantily coloured, the vessels of the retina very small, the papilla small and round, unprovided with vessels, but without the mother-of-pearl colour of atrophy. She so far recovered as to be able to distinguish the time on some days better than others, but could not read printed letters, however large. She died in 1887. Shortly before her sight was found to be much the same, but the papillæ were pearl-coloured. 2. A boy, 4 months, was attacked at dawn on June 15, 1887, with slight intermittent fever. The next day the attack was repeated at the same hour. He was ordered inunctions with quinine ointment. At twelve the next morning he had an irregular access of greater intensity. Fifty centigrammes of quinine were given in a draught and 2 grammes every two hours in enema, which, however, returned directly. At dawn the next day, at the customary hour for the attack, he had prolonged and violent convulsions, coldness of extremities, cyanosis, contraction of pupils; rectal temperature 40°·2. Thirty centigrammes of quinine were given hypodermically, and hydrobromate of quinine mixture every two hours. When the convulsions ceased there was exaggerated dilatation of the pupils and insensibility of the retina. On the 18th there were fresh convulsions, and 30 centigrammes of quinine were again given hypodermically. Two days later slight attacks occurred. The insensibility of the eyes to light began with the first inunction of quinine. On the cessation of the fever and convulsions, Dr. Santos Fernandez was consulted. The ophthalmoscope showed that the fundus was less red than usual, the papilla pale, and the retinal vessels thinned. Change of air was recommended. In September he returned well and strong. The papilla was then found white, the retinal vessels reduced to their principal branches, and so filiform that there was no circulation in them. Ten years after, the visual field was found much reduced. He could distinguish with difficulty letters No. 12 Snellen. The papilla small, white, unprovided with vessels; the retinal vessels no longer filiform. 3. Lady, 32, first seen January 1883, had suffered with her eyes since age of 16, in consequence of severe fever. This began with pain in the stomach, followed by abundant hæmorrhage from the bowel. The fever was called pernicious (probably tertian), and she was given large doses of quinine. She was unconscious for three days, and on recovery found herself blind. She was treated by iron and sea-baths, and after five months she recovered her sight and remained well for five years, after which her sight failed her, which she attributed to loss of rest while nursing her father through a long illness. Pupils were found to be oval, slightly dilated. Cannot thread her needle, distinguishes words No. 8 of scale. With convex glasses of 3·50 dioptres can distinguish letters No. 3. The field of vision extremely restricted, only extending 25 centimètres in all directions. Papilla a white disc; no vessels. At present, twenty years since her illness, the field of vision so restricted that she can scarcely see to walk, can only distinguish large characters; the papilla more atrophied. With these three observations Dr. Santos Fernandez proposes to show that when amaurosis from quinine coincides with cerebral phenomena and extreme ischæmia the vision not only is never re-established, but that, if life is prolonged, it terminates in atrophy of the papilla. G. D'Arcy Adams, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1530. Reichmann, N.—The Influence of Bitters on the Stomach in Health and Disease. (*Zeitschr. f. klin. Med.*, 1888, Band 14.)

1531. Antonio.—Researches on the Absorption of Sulphate of Spartein; on its elimination; and on its Influence on the Urinary Secretion. (*Gazz. degli Ospitali*, October 1888.)

1532. Olivia.—The Typhoid State and Phenylacetic Acid. (*Gazz. degli Ospitali*, October 1888.)

1533. Bürlakoff, Dr. V. M.—On the Influence of Muscular Work on the Assimilation and Metabolism of Nitrogenous Substances. (*Vratch*, Nos. 3 and 4, 1888, pp. 42 and 66.)

1534. Glovetzky, Dr. P. O.—On the Influence of Abdominal Massage on Circulation and Respiration. (*Vratch*, No. 3, 1889, p. 68)

1535. RÜTGERS.—A Comparison of Vegetables with Animal Albumen as Human Food. (*Centralbl. für die med. Wissensch.*, No. 5, 1889.)

ART. 1530. *Reichmann on the Influence of Bitters on the Stomach in Health and Disease.*—The author prepared cold infusions of different bitters (centaury, gentian, quassia, absinth, &c.). These he gave either on an empty stomach, or after a meal of white of egg; the contents of the stomach were then examined after various intervals of time. No great difference was found in the effect of the different bitters employed. Immediately after taking a bitter infusion there is much less activity of secretion than after taking distilled water, both on an empty non-digesting stomach, and in a stomach in which the gastric juice is normally secreted, as well as in cases in which the gastric juice secretion is impaired or increased. When the bitter infusion is taken fasting, after the disappearance of the remedy from the stomach, the secretory apparatus is stimulated to increased gastric juice secretion; the degree of acidity of the contents of the stomach is increased, and the digestion proceeds more quickly than when, *cœteris paribus*, no bitter infusion has been taken. On the contrary, when the bitter is given simultaneously with a meal of white of egg, the activity of the digestion is more or less impaired, and the mechanical activity of the stomach seemed decidedly less than normal. During digestion the secretion of the gastric juice when normal was quite uninfluenced, when less than normal it was increased. When the bitter infusion was given for several weeks no alteration of function was found either in the healthy or sick stomach; after the discontinuance of the infusion the function of the stomach was the same as before the bitter was given. As to the practical employment of this class of remedies, the author concludes that they should only be given in those cases in which the secretory activity of the stomach is impaired, and then should be taken about half an hour before food. In all other forms of functional disturbances of the stomach, so far as they are not in connection with disturbances in other parts of the digestive apparatus, with alterations over which bitter remedies may exert a favourable influence, the author considers that their employment is unnecessary and, indeed, harmful in many cases, that is, when given during the process of digestion.

G. D'ARCY ADAMS, M.D.

1531. *Antonio on the Absorption of Sulphate of Spartein, &c.*—The author has arrived at the following conclusions as the result of numerous observations on human beings, and experiments on rabbits :—1. Sulphate of spartein is absorbed readily by the stomach, the skin, the subcutaneous tissues, and the rectum. 2. It is eliminated by the urine but not by the skin or the saliva. 3. Its absorption by the stomach and elimination by the urine are very rapid. 4. The larger the dose the sooner it appears in the urine and the longer it can be found there. 5. Doses of less than $\frac{1}{7}$ gr. are not sufficient to give any reaction in the urine. 6. The absorption of sulphate of spartein takes place more slowly when the stomach is full of food. 7. Sulphate of spartein only slightly increases the urinary secretion. And in healthy individuals even this slight increase cannot usually be observed.

1532. *Olivia on the Typhoid State and Phenylacetic Acid.*—The author points out that the accumulation of waste products, together with other poisons, bacterial or not, forms one of the essential conditions leading to the typhoid state. Elevation of temperature alone is not sufficient to produce the typhoid state, for many patients with persistent high temperature (104 to 106) escape it; and in numerous instances of a fatal typhoid condition the temperature may not rise above 102° or 103°. Most antipyretics cause an extravasation of hæmoglobin from the corpuscles, arrest the amœboid movements of the white cells, diminish the affinity of the red corpuscles for oxygen, and depress the action of the heart. Robin states that antipyretics diminish oxidation, and by their action on the nervous system modify nutrition; and, furthermore, it is the opinion of many observers that after the temperature has been actively lowered by drugs convalescence is prolonged. Both benzoic acid and salicylic acid have been shown to unite with nitrogenous substances and favour their excretion, the one as hippuric and the other as salicyluric acid; and they have been much used on this account. Phenylacetic acid ($C^8H^8O^2$) occurs in the form of large feathery colourless crystals, with a roselike odour and a bitter taste. It is sparingly soluble in cold water, freely in hot, and still more readily in ether or alcohol. On oxidisation it gives rise to benzylic aldehyde, and benzoic, formic, and carbonic acids. It is monobasic, and produces a series of salts, ethers, and substitution products. The phenylacetates are very soluble. To Salkowski we owe the little information that exists as to the effect of phenylacetic acid on the living organism. He administered it to dogs in doses of one and two grammes, combined with soda, and found that it was constantly eliminated as phenaceturic acid. In the human subject, too, it was eliminated in small quantities together with hippuric acid, even when vegetables were entirely excluded from the diet. Phenaceturic acid closely resembles hippuric. The author next endeavoured to ascertain whether phenylacetic acid would split up a ptomaine, and, combining with the nitrogen, form a less poisonous product. Having prepared a ptomaine that was rapidly fatal to frogs, he administered it together with phenylacetic acid, and found that a substitution product was eliminated, having distinctly less poisonous qualities. He next gave phenylacetic acid to healthy men in doses of two and four grammes, and found that it produced no unpleasant symptoms. With restricted diet, the drug still further reduced the excretion of urea, but with an increased dietary it increased the excretion of urea. When tried in three cases of typhoid fever it was found to increase the excretion of urea very largely. It tends to lower the temperature, raises the blood-pressure, and slows and steadies the pulse.

H. HANDFORD, M.D.

1533. *Bürlakoff on the Influence of Muscular Work on the Assimilation and Metabolism of Nitrogenous Substances.*—In a preliminary note in the *Vratch*, Nos. 3 and 4, 1888, pp. 42 and 66, Dr. V. M. Bürlakoff, of St. Petersburg, describes a series of interesting experiments which he has carried out in Professor V. A. Manasseïn's clinic, in order to study the effects of muscular work (wood-cutting, carrying water and wood up a high staircase, exercise with dumb-bells weighing 10 or 15 pounds, or with a stone weighing 20 pounds, and a prolonged walk) in regard to the assimilation and metamorphosis of nitrogenous substances in healthy persons. In all, five experiments (on two medical students and a gatekeeper) were made, each consisting of three periods—to wit, *a*, a preparatory one of two or three days' duration; *b*, the period of (non-absolute) rest of four days' duration; and *c*, the period of work, lasting also four days. The dietary consisted of white bread, meat (cooked meat or sausages), broth, milk, tea, and water, the latter two being allowed *ad libitum*. The results of these very laborious and academically-careful observations may be summed up as follows. 1. Under the influence of moderate muscular work the assimilation of nitrogenous substances of a mixed diet increases; the rise varies from 1·2 to 8·7 per cent., the average being 5·02 per cent. 2. The increase remains still fairly marked for several days of a relative rest following the period of work. 3. However, heavy muscular work, accompanied with a more or less violent shaking of the whole frame (such as hewing wood, for instance), lowers the assimilation in such subjects as are not yet habituated to severe exercise. 4. As a rule, the nitrogenous metabolism is similarly increased by muscular work, the average rate being 12·2 per cent., the limits 1·1 and 18·5 per cent. Sometimes, however, the metabolism decreases. 5. The demand of the organism for water rises during muscular work, the average daily surplus being about 500 cubic centimètres. 6. The excretion of urine also usually (in three of five cases) increases, the average daily surplus amounting to about 403 cubic centimètres. 7. Muscular work apparently does not exercise any influence on the body-weight.

1534. *Glovetzky on the Influence of Abdominal Massage on Circulation and Respiration.*—Dr. P. O. Glovetzky (*Vratch*, No. 3, 1889, p. 68) has carried out a long series of experiments on man and dogs, in order to elucidate the influence produced by abdominal massage on the state of circulation and breathing. As the examination, by means of Mosso's balance, shows, the upper half of the body markedly increases in weight after the *séance*. Plethysmographic measurements prove that, during the sitting, both the upper and lower limbs increase in volume to return to their normal condition after discontinuing the manipulations. The upper extremities, however, more commonly show a consecutive increase in their bulk, while the lower ones are found not unfrequently to be decreased in volume. The blood-tension and intracranial pressure invariably rise during the manipulations, the elevation lasting for a certain period after the sitting. As to the pulse, it becomes at first quick and smaller, but towards the end of the *séance*, as well as in the after-period, it is found to be rather slow and full. The breathing becomes always considerably more energetical under the influence of the massage. In cases of artificial asphyxia (in animals) the manipulations manifest a strikingly beneficial influence on the cardiac action.

V. IDELSON, M.D.

1535. *Rütgers on Vegetable and Animal Albumen.* The *Centralbl. für die med. Wissensch.* gives the following abstract of a paper by J. Rütgers, in *Zeitschrift der Biologie*, vol. 24, p. 350. Dr. Rütgers has experimented on himself and his wife. First, they took for a long time food in which albumen predominated (meat and milk), until an equilibrium of nitrogen was attained. Then a mixture of food was taken, containing exactly equal quantities of carbonic hydrates, fat, and digestible albumen, with this difference, that the albumen was exclusively vegetable (leguminous). If vegetable albumen possessed the same nutritious value as animal albumen, the equilibrium of nitrogen would remain the same. The solution of this apparently simple problem was, however, very difficult, and, if truth be told, not very successful. The details can be found in Rütgers's article. Here we give the results of a few days' experiments, where the loss by the urine and fæces is fairly accurately given :—

	N. taken per day	Voided.	Difference
I. Animal diet ...	18·48 grammes ...	17·986...	0·494
II. Vegetable ,,	20·947 ,, ...	15·771...	5·176 (!)
III. ,, ,,	20·947 ,, ...	20·288...	0·659

In No. II. the 5 grammes difference in the loss is not explained, but in No. III. the nitrogen equilibrium has been reached, with nearly the same amount of digestible albumen as in the experiment with animal diet. The amount of nitrogen taken in II. is larger than in I., because a great part of vegetable albumen is not digested. These experiments were made on Rütgers himself. In the other person, with vegetable diet, 13,853 grammes of nitrogen were daily taken; 13·48 grammes one day, and 13·404 grammes the other day, were voided, the difference on the first day 0·372 gramme, and on the second day 0·449 gramme. From his experiments Rütgers concludes that, for the processes of change of matter, vegetable and animal albumen may be considered equal. But it must be noticed that the amount of nitrogen taken is not directly specified in any experiment, but only calculated according to the statistics found in the literature of the subject. Exception may be also taken to other points in these experiments, but generally they are of value on account of the length of time devoted in them exclusively to one or the other form of diet. Very striking are the extraordinarily low specific gravities of the urine noted by Rütgers—between 1,004 and 1,006½—concurrently with the normal volume of urine; a fact not explained.

JOHN ELLIOTT.

DISEASES OF CHILDREN.

RECENT PAPERS.

1536. JAKÜBOVITCH, PROFESSOR VASILY F.—A Contribution to the Study of Protracted Diphtheria and Perichondritis in Children. (*Ejenedelnaia Klinitcheskaia Gazeta*, Nos. 21-23, p. 409.)

1537. SOLTMANN, PROFESSOR.—Creosote in the Lung Affections of Children. (*Wien. med. Blatt.*)

1538. ANDERSON, WALLACE.—On Anomalous Forms of Measles and Scarlet Fever. (*Glasgow Med. Jour.*, No. 1, 1889.)

1539. RICE.—On Glycerine Injections in the Diarrhœa and Prolapse of Children. (*Practitioner*, December 1888, p. 418.)

ART. 1536. *Jakübovitch on Protracted Diphtheria, and on Perchloride of Iron, Turpentine, and Sublimate Corrosive in Diphtheria generally.*—In the *Ejenedelnaia Klinitcheskaia Gazeta*, Nos. 21-23, 1888, p. 409, Professor Vasily F. Jakübovitch, house-physician to the Academic Pediatric Clinic, in St. Petersburg, publishes an interesting contribution to the chapter on the so-called 'prolonged,' or 'protracted,' or 'chronic' diphtheria. While the literature on diphtheria represents a veritable library, rapidly increasing from year to year, the particular chapter under consideration yet remains exceedingly scanty. In fact, Dr. Jakübovitch has been able to collect in international literature only the following cases.

1. Vieusseux's four cases (termed by him '*le croup prolongé*'); 2, Empis's case, where the tonsils remained coated for 27 days; 3, Isambert's case of diphtheritic rhinitis, of 9 months' standing; 4, Barthez's case of 'chronic diphtheria' in a child of 11; 5, Hybre's several cases; 6, Garcia Rijo's several cases; 7, Cozzolino's; 8, Henoch's two cases of 2 months' and 15 weeks' duration; 9, Cadet de Gassicourt's case of '*la diphthérie à forme prolongée*,' of 45 days' duration. A vast majority of authorities on diphtheria, including Professor A. Jacobi, do not even mention anything concerning existence of the 'protracted' variety, which fact points out, undoubtedly, that cases of the kind very rarely occur. The scanty collection reported above is now supplemented by three cases from Dr. Jakübovitch's practice. One of them refers to a female child, aged 15 months, who, on Dec. 24, fell ill with scarlatina, complicated with faucial diphtheria. When first seen by the writer, on Jan. 8, the girl was suffering from mild fever and a complete inability of swallowing, on account of paralysis of the soft palate, her tonsils and uvula being coated with diphtheritic deposits, and the palate studded with recent scars and healing ulcers. About the end of January the temperature returned to the standard, swallowing became easier, but the deposits showed no alteration whatever. On Feb. 5, there suddenly supervened difficulty in breathing, with respiratory noises of a croupoid character, and hoarseness, which was shortly followed by complete aphonia. The child's fauces, however, became cleaner, and about Feb. 21 were found quite normal. In spite of a simultaneous general improvement, the girl's breathing grew daily worse. Tracheotomy was performed, but did not prevent death, which occurred on Feb. 25. At the *post mortem* examination a considerable laryngeal stenosis was revealed; it had been caused by a large purulent accumulation under the (thickened) perichondrium of the posterior segment of the cricoid cartilage. The diphtheritic process, therefore, lasted in the case for about 7 or 8 weeks. The second case is that of a boy of 10, who was sent to the writer with septic diphtheria, in an apparently hopeless state, the fauces being thickly covered with an offensive, tallow-like, continuous mass, the temperature subnormal (35°C.), the pulse filiform, &c. Contrary to all expectations, collapse disappeared under the influence of musk and champagne, and a slow but steady general improvement set in. The boy's fauces, however, remained thickly coated for a couple of weeks, to gradually return to a healthy condition in about seven weeks from the beginning of the disease. In the third patient, a girl of 6, the morbid process by degrees spread over the whole fauces, tongue, lips, and nostrils, its progress being accompanied by high fever (40° C. and more) and intense painful enlargement of the cervical glands. In spite of the truly desperate condition of the child, recovery took place, the mucous membranes affected becoming clean and healthy, though not before the sixty-third day of the disease. The two latter cases teach, amongst other things, that 'the practitioner must not lose hope of a favourable issue even in seemingly absolutely hopeless cases of diphtheria.' Dr. Jakübovitch, however, is inclined to attribute the recovery of his patients rather to their good constitution than to the treatment he employed. As to the therapeutics of diphtheria in general, he thinks that only perchloride of iron, turpentine, sublimate corrosive, and disinfecting irrigations, deserve attention. He administers the perchloride internally, in the shape of oleum martis Ph. Ross. (from ½ to 1 drachm in 3 ounces of emulsion, a dessert-spoonful every two hours), while turpentine and sublimate corrosive he employs only in the form of steam inhalations (every two hours). Usually he begins with turpentine, and resorts to the sublimate (1 : 1000) only when the former fails to bring any relief. For disinfecting irrigations (every two hours) he takes a lotion made of biborate of sodium, chlorate of potassium and benzoate of sodium, 1 scruple of each, with 1 fl. lb. of water. In common with Henoch, Steiner, Dokhman, Voronikhin, &c., Dr. Jakübovitch believes that 'in some cases of diphtheria every remedy succeeds, while in others all therapeutic efforts prove of no use whatever.' Not uncommonly, he says, faucial diphtheritic deposits disappear, leaving no trace, danger being, seemingly, over; and still the child suddenly dies from cardiac paralysis caused by a toxic action of the diphtheritic virus. Hence 'all our efforts are to be directed not to discovery of various means capable of dissolving faucial deposits, but, before and after all, to finding out such remedies as can neutralise the poison circulating in the blood of the diphtheritic patient. But the discovery of an antidote of the kind necessarily requires a most intimate knowledge of the virus itself, which knowledge is yet altogether wanting. The solution of the problem must be supplied by pathological chemistry, a science which remains still in an embryonic state.'

V. IDELSON, M.D.

1537. *Soltmann on Creosote in the Lung Affections of Children.*—With a few exceptions almost all observers speak well of the value of creosote in tuberculosis, and agree in saying that even if recovery is not to be hoped for, marked improvement of the chief symptoms follows its employment. All the communications hitherto published relate to adults, and Professor Soltmann, of Breslau, is the first to record his experience of the remedy in children. We have, he says, given creosote in chronic lung diseases with little or advanced destruction without considering the presence or absence of bacilli. After all due allowance is made for care in hospital, suitable nourishment, baths, good air, &c., considerable advantage is evidently derived from the administration of creosote, since cases which were not doing well began to improve unmistakably under increasing doses of creosote. He gives 2–7 drops of creosote a day, *i.e.* from 0·08 to 0·26 gramme, while adults were ordered from 0·2 to 0·5, or even 0·75 gramme daily by Sommerbrodt. Soltmann's prescription is this—℞ Creosote guttæ 4–14, sp. ether. vj.–xij., aq. dest. 50·0, sacch. alb. 10·0. A teaspoonful every two hours. It merits especial mention that the creosote was well borne by all the children. Stomach-ache, nausea, vomiting, diarrhœa, inconveniences which often render treatment by creosote impossible in adults, never occurred. Even in high fever, which by all authors is spoken of as a contra-indication, the creosote was taken without disadvantage. That the large doses helped to give the good results is probable from Guttmann's experiments on the antiseptic power of creosote on many micro-organisms. Very remarkable in many cases was the increase of appetite and gain in body-weight, the diminution of cough and expectoration, and the gradual disappearance of pathological lung-symptoms. He concludes that creosote exerts in chronic lung-disease with suspicion of tuberculosis a markedly favourable influence, especially in cases where there is not much destruction of lung or other severe complication, and where there is not too high fever, the general strength being relatively good.

G. D'ARCY ADAMS, M.D.

1538. *Anderson on Anomalous Forms of Measles and Scarlet Fever.*—The first case of measles was in a boy, aged 4 years. On Oct. 13 he was noticed to be cold and pale-looking. He was put to bed on the 15th, because he said he was tired, but there was no coryza. On the night of the 17th (fifth day) he was feverish and restless, and he continued feverish for the next few days. On the seventh day there were a few spots—not patches—on the face, and the next day there were a few on the back and on the back of the hands. On the ninth day defervescence set in, and the patient made a good recovery. There was no coryza throughout, and the only guide to diagnosis was the fact that the patient's brother had an attack of ordinary measles shortly before. [Query: Was this sufficient?—*Rep.*] The second patient was a girl, 6½ years old, who was taken suddenly ill on Dec. 31 and put to bed. She seemed better the next two days, but on the fourth day 'heat spots' were noticed on the chest and face. After that she seemed fairly well until the ninth day, when blotches were seen 'under the skin' of the legs. After a hot bath the rash came out more, and on the twelfth day was on the face. Defervescence set in after the thirteenth day. There was no coryza throughout. A few days later three of her sisters took measles in the usual form. The case of scarlatina occurred in a boy, aged 6 years. On the Saturday afternoon his health seemed perfect. On Sunday night he had an involuntary motion—a thing unknown before. When first seen, on Monday evening, he was in a state of collapse, with pale face and dilated pupils, and he died three-quarters of an hour afterwards. There had been no rash and no throat affection; two of his play-fellows, however, had some slight desquamation about the finger-nails, and four days afterwards a brother had an ordinary attack of scarlet fever.

RALPH W. LEFTWICH, M.D.

1539. *Rice on Glycerine Injections in the Diarrhœa and Prolapse of Children.*—In the *Practitioner*, December 1888, p. 418, Mr. Rice, M.B., records some interesting cases illustrating the value of glycerine injections in some forms of diarrhœa in children. The following is a good example of the manner of using it. A little boy, aged 4 years, was admitted into the infirmary on account of diarrhœa and loss of flesh. The motions were frequent and offensive, and every time the bowels were moved there was prolapse of the rectum to a very great extent, and blood was passed with each stool. Various remedies were tried without effect, and the author determined to try glycerine; accordingly, two drachms were injected. This at once checked the diarrhœa, but, as it did not entirely stop, the glycerine enema was again given on the second day, and a third one a few days afterwards. From the beginning of this treatment the child began to mend, the diarrhœa and hæmorrhage ceased, and the bowel did not come down after the child's strength returned. Glycerine has been much used of late in the treatment of constipation, but it has not been tried largely for the relief of diarrhœa. The author finds that these injections do not give the children any pain, and trusts that a further trial will be given to this plan, as he is confident that it will meet with complete success.

RICHARD NEALE, M.D.

REVIEWS.

ARTICLE 1540.

The Syphilitic Affections of the Nervous System; their Diagnosis and Treatment. By T. M'CALL ANDERSON, M.D., Prof. Clin. Med. Univ. Glasgow. Jas. Maclehose & Sons. 1889. Pp. viii. 89.

PROFESSOR M'CALL ANDERSON has written this book with the object of controverting the opinions entertained by some that 'but few cases of syphilis are followed by affections of the nerve-centres, and mercury is only necessary for severe outbreaks of the disease.' The author's view is 'that just because mild syphilis is apt to be treated in a cavalier fashion, and without due care and persistence, disease of the nervous system is very apt to follow in its wake; and that such disease is much more common than is generally supposed.' Accordingly, the author here reports twenty-four recent cases of various nervous affections due to syphilis, selected from those under his care. In each case the author's reasons for diagnosing syphilis are given in numbered paragraphs, and altogether the cases form a most interesting clinical study. In the first four the peripheral nerves were chiefly affected; in the next three, headache was the main symptom; in the next four, epileptiform seizures were present; in the next five, hemiplegia was the sole or prominent feature. The remaining cases comprise various pareses, including tabes dorsalis. The last is a case of aphasia. Nearly all were perfectly cured, and the rest were much benefited by vigorous anti-syphilitic treatment. In the chapter on the diagnosis of syphilis thirteen points are enumerated and discussed as we should expect from such a clinician as the author. He is an advocate for mercury in the later stages of syphilis, when potassium iodide has failed (sometimes before it is tried), and recommends inunction or subcutaneous injection. His method of giving the latter is described. An Appendix contains a full report of a debate on 'The Diagnosis and Treatment of Syphilitic Affections of the Nervous System,' opened by the author as president of the medical section of the British Medical Association, at its meeting last August in Glasgow.

The author amply proves his opening statements in this book, and the logical manner in which the facts of each case are marshalled, his lucidity of expression, and the nature of the affections treated, make it most instructive reading to the practitioner.

E. J. EDWARDES, M.D.

ARTICLE 1541.

A Text-Book of Human Physiology. By AUSTIN FLINT, M.D., LL.D., Professor of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College, New York, &c., &c. Pp. 872. 8vo. With 316 figures in the text and two plates. Fourth Edition. Entirely rewritten. Printed in America. Published in London by H. K. Lewis, Gower Street.

THE fourth edition of so well-known and popular a book as *Flint's Physiology*, under ordinary circumstances, scarcely calls for a detailed notice. When, however, such an edition claims, as this does, to have been *entirely* rewritten, it must be considered almost in the light of a new work, and as such demands more than a mere passing recognition.

All those who have been familiar with the many excellent points in the former editions of this text-book will discover in the present edition no falling off, but will rather recognise many improvements which have been suggested by longer experience of the author as a teacher.

The general arrangement of the book we are told in the preface is retained, but of the original text little remains. The author has been obliged to make many alterations in the present edition, in order to bring the book as near as possible to what he considers a text-book should be, namely that it should consist of 'concise and corrected statements of well-established facts, in such a form that they can easily be acquired by students and in language that cannot be misunderstood.' However much we may feel inclined to endorse this precept, we feel obliged to take exception to certain other principles which are enunciated in the preface. It appears undesirable, in our opinion, for example, to relegate physiological chemistry to special treatises, and to hand histology bodily over to the anatomist. A medical student cannot be expected to obtain in the limited period allotted to the study of physiology more than an elementary knowledge of physiological chemistry, and such a knowledge he ought to be able to obtain from his physiological text-book. Again, histology is at present, at any rate in this country, treated of as part of physiology and not of anatomy, in our opinion rightly so included.

Having restricted the scope of his work in the directions indicated, it must be acknowledged that our author has carried out his views of what a text-book should be with much success. The writing is clear and concise, the matter is well arranged, peculiar views and theories, whether of the author or of others, have been omitted, and the text may be said to represent generally recognised and accepted facts.

It would be impossible without filling more space than we have at command to give a detailed review of the matter of the whole book, but the following points have struck us as being of importance.

The first chapter, on the Blood, would have been improved, we venture to think, by a more extended account of hæmoglobin and its derivatives, as well as by an account of the more recent researches on coagulation. The illustrations of the chapter on the Heart, obtained from various sources, are particularly good. We think, however, that no account of the action of the heart is complete which does not accentuate the recently demonstrated independent contraction of its muscle. Many of the experiments which were formerly considered to prove the functions of the cardiac ganglia, are now, we believe, considered by many physiologists to be anything but conclusive.

A very complete account of the muscles of respiration is given in the next chapter, which is one of the best in the book. The following chapters on foods and alimentation and digestion are also excellent.

In the latter are included some observations of Beaumont upon Alexis St. Martin, the Canadian, who had a large fistulous opening into the stomach. These observations are historical, and upon them depends most of our knowledge, at any rate, of the digestibility of various foods; it is a pity that they should be unknown to the rising generation. The physiology of the skin and kidney, with the chemical composition of the urine will be found of much service, but we consider the sections devoted to the action and composition of muscle as being by no means complete. The nervous system is treated of in the eighteenth and following chapters, and will be found, for the most part, up to date, although we should have liked to have seen inserted Gaskell's account of the sympathetic system. It is the opinion of some of the greatest of living physiologists that if these researches be confirmed by subsequent investigation, they must modify if not completely alter considerable part of the physiology at present received. An account of the special senses follows, and the remainder of the book is devoted to the consideration of the organs and elements of generation, and of the development of the ovum, which is quite sufficient for the ordinary student.

As regards the printing of this book, and of the illustrations, we may speak with unqualified praise; the 'bringing up' of the latter is, for a medical text-book, quite exceptionally good.

Vincent D. Harris, M.D.

Article 1542.

The Year Book of Treatment for 1889: *A Critical Review for Practitioners of Medicine and Surgery.* London: Cassell & Co.

The greatest credit is due to the projectors of this volume, and to the gentlemen who have assisted in its production. Very obvious objections might be made against attaching much value to a mere record of therapeutic successes, and more or less ill-digested observations on the employment of new remedies. No such objection can be raised against the plan of this volume, and very little fault can be found with its execution.

The contributors have kept in mind the second part of the title of the book, and have not only carefully weighed the matter and treatment reported, but have exercised their critical faculties in short comments and reviews.

This latter function might, we think, have been more freely exercised with advantage to readers, since the list of contributors is a sufficient guarantee that such reviews would prove of the greatest value. The interest of many sections, notably that of 'Diseases of Women,' is greatly enhanced by the introductory survey, and we think such a plan to be worthy of general imitation.

The volume is eminently readable, is interesting, and likely to be of great service to the profession.

Article 1543.

Epitome of Diseases and Injuries of the Ear, with a Chapter on Naso-Pharyngeal Diseases causing Deafness. By W. R. H. Stewart, F.R.C.S. and L.R.C.P.Edin., &c. London: H. K. Lewis. 1888.

This miniature work on diseases of the ear, as we gather from the preface, is intended for the student's use in the wards, to serve as a refresher to the memory before examination, and as a ready reference for the busy practitioner in his daily work. It follows the usual lines of a text-book on aural surgery, but contains all its information in a highly condensed form. Numerous practical hints are to be found throughout the book; but, on the other hand, there are some defects to remedy which would add to its value. Amongst these may be noticed the absence of any directions for testing the ears separately with the voice, the incompleteness of the rules given for perforating the mastoid, and the absence of reference to diseases of the pharyngeal tonsil in considering the causes of collapse and obstruction of the Eustachian tube (on page 49). To speak of catheterisation as 'Politzer's method through the catheter' (page 22), is misleading if not erroneous; and that nasal polypi grow, as a rule, from the turbinated bones, is a statement at variance with Zuckerkandl's researches.

After these criticisms we pass to a few statements indicating the author's own practice. For narrowing of the Eustachian tube due to catarrh, he finds that passing Eustachian bougies often does great good. After the removal of aural polypi he recommends the use of hot water to stop hæmorrhage. Where there is carious bone he advises the employment of sulphurous acid lotion (1 in 8).

The author also has some sound remarks on the absolute necessity of avoiding all force when examining or operating on the ear, and on the strict avoidance of all instrumental interference for the removal of foreign bodies from the meatus by those not skilled in the use of aural instruments.

We should think this might fairly claim to be the smallest hand-book of aural surgery extant, and the one containing, for its size, the greatest amount of information on the subject.

E. CRESSWELL BABER, M.B.

ARTICLE 1544.

The Treatment of Inebriety in the Higher and Educated Classes. By JAMES STEWART, B.A., M.R.C.P.Edin. London: H. K. Lewis.

THE literature of inebriety is growing apace. This latest instalment embodies the conclusions arrived at by one who has for a dozen years been honourably known as personally engaged in the treatment of inebriates. It is interesting to note how the evidence in favour of a diseased condition in inebriety is steadily accumulating. Dr. Stewart is emphatic on this point. He lays down that in such cases there is a lesion of the brain as pronounced as if a portion of that organ were sliced off. When this lesion has gone so far as to affect the will-power the disease is declared. He points out the confusion which generally prevails as to drunkenness and the disease of inebriety, which are not the same thing. There may be drunkenness without any underlying brain-disease. In the treatment time must be allowed for the reparation of sound cerebral tissue, the period required depending principally on the extent of the lesion. Twelve months in a home from which all intoxicants are rigidly excluded is the shortest period likely to result in a permanent cure. All alcoholic beverages must be cut off from the first, there being no risk in their sudden discontinuance if the patient is under close medical supervision. The author holds that, as moral treatment by example is essential to supplement therapeutic remedies, the physician undertaking the care of such patients should be a staunch abstainer, with an abstaining household. Finally, the need for proper after-care is enforced, the permanence of the cure being markedly influenced by the presence or absence of liquor in the abode of the patient's family. This *brochure* contains much that is suggestive.

NORMAN KERR, M.D.

ARTICLE 1545.

Epitome of Surgery; being a Complete Compendium of the Science and Art of Surgery. By RIDLEY DALE, M.D., M.R.C.S., &c. Member of the Northumberland and Durham Medical Society, Surgeon to the Hospital for Foreign Seamen, Sunderland. London: H. K. Lewis, 136 Gower Street. 1889.

DR. RIDLEY DALE has evidently spent much time and pains in the preparation of this work, and produced an excellent synopsis of modern surgery. The matter is well arranged and clearly expressed, and though condensation must be an important object in a book of this kind, each subject has been fully discussed. The latest additions to surgical literature, both at home and abroad, have been noted by the author, who has thus succeeded in bringing out a really valuable epitome of our present knowledge of the art and science of surgery, and of surgical pathology. Still, notwithstanding his success in making what is questionably styled a 'little manual' as complete as possible, we doubt very much whether it will fulfil the author's primary intention of serving as an aid to the student when preparing for examination. If the student should require a synopsis under such circumstances, he cannot, we think, do better than prepare one for himself. As an aid to the teacher rather than to the pupil, Dr. Dale's book will be found very useful, and we can recommend it heartily to the busy practitioner as one of the best works of reference with which we are acquainted.

NOTES ON BOOKS.

ARTICLE 1546.

Œuvres Complètes de J. M. Charcot. Maladies des Poumons et du Système Vasculaire. Tome 5. (*Complete Works of J. M. Charcot. Diseases of the Lungs and of the Vascular System.* Vol. 5) Paris: E. Lecrosnier et Babé. 1888. Pp. 654.

IN the midst of the modern race for the advancement of medical science, the accumulation of half-digested facts, and the ever-increasing number of condensed manuals dealing with great subjects in a little space, it is with a sense of positive rest that the reader may turn to the scholarly, exhaustive, and closely-reasoned writings of M. Charcot. In the present volume, consisting, as it does, of a collected series of M. Charcot's lectures and essays on the subject of diseases of the lungs and of the vascular system, he will find no new facts or sensational revelations, and he may even look in vain for much information with respect to diseases such as tubercle, of which he may already be in possession. But in its place he will note how thoroughly and satisfactorily the work of the pathologist and clinician may be combined, and how by steady adherence to single lines of thought the true nature and history of a disease may be read, even without the aid of the modern appliances for microscopic research. As a contribution to the knowledge of the moment it cannot be claimed that this record of the studies of the past thirty years should hold its own; but as a contribution to the style of medical study and composition it may hold a place for all time to come. Many of Professor Charcot's views on the pathology of chronic disease of the lung have been well known for many years. Their systematic arrangement in the present volume should be as welcome to all who have studied them in the past as were the lectures of the late Sir Thomas Watson to the generation which is now growing old. The analogy of the fibrotic processes in chronic hepatic, renal, and pulmonary diseases, and the tendency to return to the embryonic type, of the epithelial lining and walls of alveoli, are here discussed and demonstrated with the utmost precision and detail. The chronic processes consecutive upon the various forms of pulmonary inflammation are classified and compared. The tubercular affections, studied at a period long anterior to the discovery of infective micro-organisms, are followed out with a conciseness which has not been surpassed by any more recent writer, and much of the theory deduced from the more restricted observations of that day remains as true now as at the time that it was formulated. To attempt to follow out the wide range of Professor Charcot's researches on the subjects of which his lectures treat would occupy more space than is at our disposal, and hence it must suffice that the work should be commended to all students of pulmonary pathology, not alone for the historic interest which attaches to the work of an acknowledged master of his art, but as a model of thorough and scientific reasoning upon carefully verified observations.

E. Clifford Beale, M.B.

Article 1547.

Das Höhenklima in Meteorologischer, Physiologischer, und Therapeutischer Beziehung. Von. Dr. August Ladendorf, in St. Andreasberg. (*The Altitude Climate in its Meteorological, Physiological, and Therapeutic Relations.*) Berlin: Eugen Grosser. 1889.

In the present pamphlet, which deals with a part of the whole subject only, the conditions of climate at high altitudes are analysed with precision, in respect of their relative warmth, amount of sunlight, winds, moisture, &c.; and comparison is made of the various inhabited altitudes in all parts of the world, detailed reference being given to the observations from which the facts are deducted. The relations of temperature to altitude form an interesting study, and by the light of Dr. Ladendorf's researches, present many new considerations of note. Rainfall and prevalent winds come in for a large share of attention, and the thoroughness with which all parts of the work have been carried out strongly commend it to the notice of all who are interested in the details of mountain climatology, and their application in relation to health and disease.

E. Clifford Beale, M.B.

Article 1548.

The Student's Handbook of Forensic Medicine and Public Health. By H. Aubrey Husband, M.B., C.M. Fifth Edition. Edinburgh: E. & S. Livingstone. 1889. Pp. 614. Price 10*s.* 6*d.*

A book which has reached a fifth edition does not call for extended notice at the hands of a reviewer. Still, however good a thing may be, there is always room for improvement, and we therefore take the opportunity of pointing out to the author one matter in respect of which, we think, he might add to the value of his work. He seems sometimes to forget that he is writing for students, and he presupposes a knowledge on their part of events which, though recent to him, are prehistoric as regards their student days. For instance, the student is told that the methods of Marshall Hall and Silvester are those mostly in vogue for restoring the apparently drowned, but no further information is vouchsafed as to them, whilst a whole page is devoted to Howard's direct method, which is surely of less importance. Again, under the head of chloroform-poisoning, the student will read, 'A Mrs. Bartlett was recently tried for poisoning her husband by the administration of chloroform. The case, which presented several interesting peculiarities, ended in the acquittal of the lady.' That sort of reference to a case does not help the student at all, and it would be, in our judgment, better to make no reference at all to a case than give such a notice of it.

Article 1549.

The Journal of Laryngology and Rhinology. Edited by Sir Morell Mackenzie, M.D. Lond., and R. Norris Wolfenden, M.D. Cantab. Vol. III. Nos. 1 and 2. London: R. Anderson & Co.

The January number of this journal contains an interesting article of some length by Dr. Luc, of Paris, on Laryngo-tracheal Ozæna, and some clinical notes by Dr. Tauber, of Denver, Colorado, which deal with 'Tuberculosis of the Pharynx,' 'Enlargement of the Submaxillary and Cervical Glands in the Neck,' and 'Angioma of the Epiglottis.' The February number opens with a clinical note by Professor Massei, on the treatment of laryngeal papillomata, in which he recommends Heryng's curettes. This is followed by a short note of Dr. J. Solis Cohen's on enlarged pharyngeal tonsil in the aged. The remainder of both numbers is occupied with numerous abstracts, together with reviews, reports of meetings, and accounts of new preparations.

E. Cresswell Baber, M.B.

NOTICE OF MEETING.

The following notice has been issued by the French Minister of Commerce in regard to the Congress of Hydrology and Climatology which is to take place in association with the Universal International Exhibition, 1889:—The Second Session of Hydrology and Climatology, the organisation of which has been already announced, in accordance with the decision of the general meeting of October 8, 1886, at the Congress at Biarritz, will take place at Paris from October 3 to 10, 1889. All French and foreign societies and associations, togethe with the *savants* of all nationalities, are invited to tak part in this international *réunion*.

The Congress will consist of honorary members an subscribing members, both French and foreign. The subscribing members will be called upon to pay a sum o 20 francs each. The cards of membership of the Congres will not confer the right to gratuitous entrance to th Exhibition, but a ticket will be handed to each membe for each *séance* held within the Exhibition buildings The Committee begs to call attention more particularly t a number of questions of which the programme will b found below. Most of these questions will be the subjec of an *exposé*, or a paper, which will be printed and forwarded to all members of the Congress three month before the opening of the Congress, and will serve as basis for the discussions in the different sections. Th mission of the authors of these papers will be to discuss the actual position of science as concerns the question treated by them, but they will not be forbidden to make known their own investigations or personal views. The Committee of Organisation therefore decline all responsibility for the opinions contained in these reports.

In addition to the questions comprised in the programme, other papers on Hydrology and Climatology may be brought before the Congress. The authors of such papers are requested to forward to the Secretaries of the Congress the titles and conclusions of their papers at least one month before the opening of the Congress.

After the Congress a series of excursions will be organised into the watering-places of the Vosges, the details of which will be communicated to each member of the Congress later on. The Committee will take the necessary steps to obtain the usual privileges or reductions in fares which the railway companies grant under similar circumstances.

The proceedings of the Congress will be collected and published under the direction of a special committee appointed by the Committee of Organisation, and members will receive gratis: 1, immediately after the termination of the Congress, an abstract report of the proceedings of the Congress; 2, later on, a full report of the proceedings of the Congress, together with a list of the patrons and honorary and subscribing members and the resolutions and proceedings of the Congress.

A copy of the rules and statutes of the Congress will be sent to members at the same time as the above reports.

The Committee hope that all who are interested in the study of Hydrology and Climatology will take part in the principal sittings of the two branches of these two departments of medical science, and beg them to communicate their intentions as soon as may be convenient.

The Secretary-General, The President,
Dr. F. De Ranse. E. Renou.

QUESTIONS PROPOSED BY THE COMMITTEE OF ORGANISATION.

I. Hydrology.

a. Scientific Hydrology.

1. What precautions should be taken in order to determine the exact temperature of thermal springs? 2. On the influence of geological formation on the composition of mineral waters. 3. On the micro-organisms contained in mineral waters and their influence on the composition and properties of such waters. 4. On the influence of microbian theories on thermal therapeutics. 5. On the origin of the gases contained in mineral waters and their share in the properties of such waters. 6. On the vapours given off by mineral waters and the changes they undergo. 7. Scheme for a course of instruction in hydrology.

b. Medical Hydrology.

1. On the resources of thermal therapeutics in the treatment of diseases of the heart and vessels. 2. On the resources of thermal therapeutics in the treatment of chronic hepatic diseases. 3. The hydromineral treatment of grave utero-ovarian neuralgias. 4. The hydromineral treatment of osseous and articular tuberculosis. 5. The hydromineral treatment and sea-baths for children. 6. Dry and moist chambers—*modus operandi*—and applications. 7. On local douches in balneotherapy.

II. Climatology.

1. The conditions which should preside over the installation of a meteorological observatory in its medical applications. 2. Organization of a weather report service in health-resorts. Rules for foretelling the weather. 3. Climatology of the various sanitary stations. 4. Comparison and classification of health-resorts according to climatological conditions. 5. On the action of high altitude climates on affections of the chest. 6. On the action of maritime climates in tuberculous affections. 7. Scheme for a course of instruction in climatology.

Committee of Organisation.

M. Renou, *President*; Dr. Danjoy, *Vice-President*; Dr. F. De Ranse, *General Secretary*; M. Schlemmer, *Secretary*, &c.

All communications should be addressed to the Secretary-General—M. De Ranse, 53 Avenue Montaign Paris, from Oct. 1 to June 1; and to Néris (Allier), fro une 1 to Oct. 1.

Gentlemen intending to join the Congress are requested to send in their adhesions to the Treasurer of the Congress—M. O. Doin, 8 Plâce de L'Odeon, Paris, to be accompanied by a postal order for 20 francs.

MISCELLANY.

The German Dermatological Association, founded by sixty-nine dermatologists of various countries, will hold its first Congress at Whitsuntide this year in Prague. The membership is 10*s*. yearly. The bureau of the Association has for the present the address, Prague, Jungmannstrasse, 41. Professor Pick is the president, Professor Neisser the secretary, Professor Lipp the treasurer. Herren Caspary (Königsberg), Doutrelepont (Bonn), Kaposi (Vienna), Lewin (Berlin), and J. Neumann (Vienna), take part in the direction. It is proposed to hold an exhibition of objects of theoretical or practical interest in connection with dermatology and syphilology. This Congress will, it is expected, form an epoch in the annals of dermatology.

A Pasteur Institute at Rio Janeiro.—At a recent meeting of the Académie des Sciences, M. Pasteur showed a dozen photographs of the Pasteur Institute, which the Emperor of Brazil has established at Rio Janeiro. The statistics of the Institute, from the date of its opening (Feb. 9, 1888), until the month of October, show that 69 well-authenticated cases of rabies have been treated there. One of the patients succumbed during treatment, but this death is attributed to the rabid incubation of the disease (23 days) and to the fact that the little patient was not taken ten times to the Institute during this period. Three other children, bitten by the same dog in May, and submitted to the complete treatment, have showed no symptoms of rabies since.

Prophylaxis of Phosphorus Necrosis. — M. Magitot, at a recent meeting of the Académie de Médecine, read a paper upon phosphorus necrosis, observed in persons employed in the manufacture of phosphorus. M. Magitot concludes, from 65 cases which he has observed in France and abroad, that this affection is produced by the phosphorus vapour, introduced into a special form of caries, which he terms 'penetrating caries.' The prophylactic measures consist in thoroughly ventilating and isolating the factories, and in suppressing or neutralising the phosphorus atmosphere. No persons of defective constitution should be allowed to enter the factories, more especially when the mouth is affected. If these measures be rigorously observed, all danger of phosphorus necrosis will be averted.

The Diagnosis and Treatment of Extra-Uterine Pregnancy.—The first triennial prize of two hundred and fifty dollars under the deed of trust of Mrs. Wm. F. Jenks, has been awarded by the prize committee of the College of Physicians of Philadelphia, to John Strahan, M.D., M.Ch., M.A.O. (Royal University, Ireland), 247 North Queen Street, Belfast, Ireland, for the best essay on 'The Diagnosis and Treatment of Extra-Uterine Pregnancy.' The writers of the unsuccessful essays can have them returned to any address they may name, by sending it and the motto which distinguished the essay, to the Chairman of the Prize Committee, Ellwood Wilson, M.D., College of Physicians, Philadelphia. The trustees, Messrs. James H. Hutchinson, John Ashhurst, jun., and James V. Ingham, have made arrangements with Messrs. P. Blakiston, Son & Co., 1012 Walnut Street, Philadelphia, for the publication of the successful essay, which will also appear in the Transactions of the College for 1890.

Remedy for Sea-sickness.—M. Paul Loye revives the hope that sea-sickness may be successfully combated. Drugs have proved a deception. M. Loye, by mechanical therapeutics, conquers the enemy without depriving the patient of the use of any of his senses. This system, called *calage*, M. Loye describes as follows. The patient is made to lie on his side. A pillow is placed between the stomach and the wall of the cabin; between the back and the edge of the berth another pillow is placed. The patient is thus surrounded by a sort of cuirass which follows all the movements of the boat, and the viscera are maintained in an immobile position. M. Loye tested this method himself, and found it perfectly efficient. Every time he changed his position to lie on his back, the symptoms of sea-sickness were immediately manifested, and disappeared directly he resumed the attitude above described. The abdominal belt, which is often recommended as a preventive to sea-sickness, and different drugs, M. Loye found to be useless.

Pathological Inferiority of the Left Side of the Human Body.—When a unilateral lesion attacks any of the double organs of the human body the left organ is more frequently affected than the right. Thus, obliterating arteritis attacks the left sylvian artery, tuberculous infiltration occurs in the left apex, pneumonia in the left lung; calculous nephritis, or cyst of the kidney attacks the left kidney, ovaritis and ovarian hyperæsthesia are observed in the left ovary, orchitis affects the left testicle, &c. M. Henry Duchenne tries to explain this fact by the greater activity of the right side of the body and the relative passive condition of the left side, which contains the heart. The mechanical activity of the right side determines nutritive activity. The mechanical passivity of the left side produces a kind of physiological mealiness, a pathological predisposition. Dr. Duchenne considers that the law of atavism may also explain the physiological inferiority of the left side of the body, for in ancient times, when hand-to-hand fights were always occurring, the activity of the right side of the body was constantly called into play.

Dr. Benjamin Howard showed at the Royal Medical and Chirurgical Society on Nov. 26 a patient of Dr. Wolfenden's with an abnormally developed hyoid bone combined with general emaciation. Calling attention to demonstrations by him on the cadaver, favourably reported upon by a special committee of the Society, November 1879, he said this patient enabled him proximately to repeat in part these demonstrations, the action of the Senior epiglottic mechanism for the raising of the epiglottis, as he had described it, being in this patient distinctly palpable. He called special attention also to the recession of the body of the hyoid bone within the thyroid rim and upon the epiglottis under excessive head flexion; that this, in conjunction with the downward and backward forcing of the tongue by the descending hard palate explained the possibility of fatal suffocation from head flexion in intoxication, to which he had previously called attention, and also under partially insensitive conditions from other causes. He further showed by comparative anatomy specimens how in the sheep and some other animals the same well-known fatality sometimes occurs even in the sensitive state in the supine position, minus head extension, and from excessive head flexion in frantic and persistent struggling to regain their lost standing position.

Professor Ray Lankester has recently delivered a lecture at the London Institution, entitled 'Darwin *v.* Lamarck.' He commenced by giving a short sketch of the life and work of the great French naturalist, one of the earliest of the propounders of the evolutionary theory, and then proceeded to explain and discuss the chief points of his theories on the subject. These he summarised under two great heads:—1. That in animals, in an immature condition, the constant and increased use of any special organ tends to develop and enlarge both the organ and its powers; and that this development is in a direct ratio to its use. Conversely, the constant and continued disuse of that organ produces deterioration, and results finally in its disappearance. 2. That the peculiar features gained or lost by individuals by the continuous action of circumstances are preserved in reproduction, and are transmitted to the offspring, provided that these acquired features existed in both parents; and, further, that these changes, though small, are increased in successive generations by the same action of the causes which originated them, so as to produce in long periods of time, in the descendants, complete alterations both as to form and structure as compared with those of the original ancestral types; and, finally, given sufficient time, these small changes can and have produced both man and the higher animals from the simplest protoplasmic animalcules. Professor Lankester then proceeded to examine these two principles in detail. He then compared the two theories at considerable length; he showed that the principle upon which Lamarckism was based was not true in fact; that all experience contradicted the assertion that any change of structure acquired during life was transmitted; while, on the other hand, the transmission of variations originally congenital was a fact based on the widest experience. As an illustration of the two principles, he said that animals who lost their ears or tails did not give birth to earless and tailless offsprings; while parents born with malformations did transmit these abnormal deformities to their children. The remainder of the lecture was an examination, in careful detail, with illustrations, of the various minor incidental causes which are at work in the modification of the changes which take place in the formation of new varieties, the most interesting of which was that which Professor Lankester called 'Correlated variations,' which was illustrated by a model. The principle is, that when one part of a body alters in size or colour, some other part or parts must also alter.

A Remarkable Defence of Hypnosis as a Remedy.—Dr. Rick, of Schönberg, in Hollstein, has written the following letter to the editor of the *Deutsch. med. Zeit.*, No. 14, 1889, *à propos* of an article on hypnosis in that journal:—'The chief points of the author's (Sperling) are shortly these—viz. 1. Hypnosis is the last resource in treating psycho-physic conditions. 2. The physician is justified in studying hypnosis with a view to utilising it as a means of curing disease. 1. But why should it be a last resource? The problem is, after all, a simple one to solve, if you consult the teachings of psychology and of the history of epidemics. You will find that here we have to deal with a most peculiar reflex psychosis which appears and disappears epidemically and endemically, as in the wonderful psychopathics of antiquity and the Middle Ages. We must only accustom ourselves to see psychical disease in such patients as appear compliant subjects to the experimenter and healer. Therefore "healthy" subjects who submit themselves to experiment must be regarded as being psychically weak or already under the influence of the epidemic and, therefore, less capable of resistance. How much depends on those two opposites, intensity of will and intensity of the imitative desire, is taught by the history of human diseases of the will, follies and absurdities. Hence, it is but our defective knowledge of psychology which makes us speak of problematic symptoms and natures. Our patients are psychical patients, and their primary disease, anomaly of the will and self-consciousness, is reflected in the various degrees of fear and nervousness (as in cholera, consumption, and rabies); further, in the expressions of weakness of mind and helplessness in hypochondria and hysteria it is genuine psychosis. In cramp and paralysis it appears as secondary neurosis, and as secondary neuropsychosis in the exaltation of chorea and alcoholic intoxication. If, therefore, in the present time, when the whole nervous life bears the character of irritable weakness (Braid and Mantegazza), and suffers as it were under the high pressure of electric tension; if, we say, at present hypnotic experiments yield truly wonderful results, not only of a therapeutical value, it is a sign that the point of affection and least resistance is not to be sought in the nerves, nor in the glands, nor in the blood, but solely in the organ of the will—the Psyche. He is a master of medicine who, like the physician of physicians, understands psychological therapeutics. . . . Therefore, I object to the first point and assert rather that at the present day the Psyche should form the first point of attack in every treatment. Hypnosis is specifically psychological, therefore let it be applied. 2. The second point must be modified by saying that the physician must be before all a psychologist. Let there be no public exhibitions; for why should we manufacture more fools and slavish wills?'

The London Medical Recorder.

Article 1550.

BERLIN ON SNOW-BLINDNESS.*

Hitherto snow-blindness has been regarded as a disease of the inner parts of the eye, owing to the dazzling effect upon the retina and optic nerve of the intense reflection of light from the snow. Some writers even compare it with hemeralopia and nyctalopia, but those who have had an opportunity of personally examining this malady have noticed the presence of symptoms of irritation in the conjunctiva. They assign as the cause of the conjunctivitis the drying effect of the air at high elevations. The author of the paper, Dr. Aug. Berlin, who has himself had opportunities of making a special study of this affection during Nordensköld's Greenland expedition in 1883, has come to conclusions, both as to the nature and etiology of the disease, opposed to the current opinions.

Snow-blindness occurs in the Arctic regions as far north as man has penetrated, while to the south it does not pass certain degrees of latitude. On the American and Asiatic continents it extends further south than in Europe. Thus it advances in America to the fifty-third degree of northern latitude, while it is unknown in Scandinavia. Its diffusion is exhibited on a map given in the *Nordiskt Arkiv.* To the south of the Arctic regions snow-blindness only appears sporadically on high mountains, such as the Alps and Caucasus. In the Arctic regions it appears principally in spring, though it is also met with in summer wherever snow remains, as on glaciers. It is produced not only when the sun is shining, but also during storms and snow fogs. The symptoms are burning and intense pain in the eyes, beginning as a pricking sensation like that following the presence of a foreign body, increased lachrymal secretion, photophobia, and spasmodic closure of the eyelids. At first the hyperæmia affects the conjunctiva of the eyeball, then it passes to that of the lids. There is at the same time a chemosis affecting the open portion of the eye, exposed to the air. In serious cases the cornea becomes dull and opaque, the pupil is contracted, and the fundus of the eye slightly congested. The power of vision is not diminished, only obscured, by the symptoms just mentioned. The great majority of cases recover of themselves if the patient is removed from the exciting causes. In some cases ulcers of the cornea and other destructive processes may lead to diminution and even loss of sight.

Except in such cases there is no diminution of visual power following on the snow-blindness. The affection sometimes attacks only one eye, the one most turned to the sun. Even animals may suffer from snow-blindness. The symptoms as well as the manner in which they are produced confirm the supposition that snow-blindness gives place to a dazzling, owing to the effects of sunlight. Thus, when a person independently looks at the sun the dazzling is not attended by any pain, nor does there exist the slightest symptom of irritation of the anterior parts of the eye.

There is produced, on the other hand, a persistent diminution of the visual plane, accompanied by scotomas, which are totally absent in snow-blindness. There ought to be produced a dazzling of the eyes by the action of the intense brightness of the snow, and especially when both snow and sun are present; but this is not the case in snow-blindness. The disease occurs most frequently when the air is most rarefied and the atmospheric pressure least. In the regions where snow-blindness is prevalent there is at once a low temperature and a diminution of absolute moisture in the air. As it is principally the moisture which absorbs the heat rays, the rays of the sun act with much greater intensity than usual. On high mountains and in the Arctic regions exposure of the skin to the sun and reflected light from the snow produces a troublesome dermatitis, of which the author quotes many examples. He concludes from numerous direct observations that in the Arctic regions this exposure reaches its maximum in spring.

The eyes are often affected about the same time as the skin. The process is the same—hyperæmia of the skin and of the conjunctiva, then serous exudation, both followed by the intense smarting so characteristic of snow-blindness. The hyperæmia of the retina is easily explained by the violent irritation of the conjunctiva. Dr. Berlin rejects the supposition that the hyperæmia of the retina is caused primarily by the exposure to the sun.

He quotes amongst others the experiences of Janssen, showing that the retina is only struck by a very small portion of the heat-rays. This erythema of the conjunctiva is also produced by mechanical irritants such as hard particles of snow, which strike the eye during storms, or small sharp needles of ice in snow-fogs. The author advances the theory that snow-blindness may occur sometimes in a less painful form, especially in that of phlyctenular conjunctivitis, which appears in the beginning of spring. The natives of the region where snow-blindness is prevalent use as preservatives to the eyes spectacles made of pieces of wood pierced by a transverse slit, or with a network of metallic wire or thread. The spectacles used in the later Arctic expeditions, of which an engraving is given, consist of a network of iron wire at the sides, and have in front a plate of glass for direct vision. As the glasses become easily covered with vapour or rime, Dr. Berlin recommends the use of iron wire alone. Even after snow-blindness has appeared the spectacles are useful in counteracting the photophobia which accompanies it. An opiate should be used to subdue the intense pain, and Dr. Berlin suggests in future expeditions the use of cocaine. W. W. Ireland, M.D.

Article 1551.

ETHER AS AN INTOXICANT.

In answer to a question in Parliament on this subject, the Chief Secretary for Ireland said that the Constabulary authorities reported that ether was constantly used as an intoxicant in some parts of Londonderry, and the Resident Physician of the Asylum reported that insanity in his district was produced in many cases by an indulgence in this pernicious habit, combined with other causes. The Constabulary reported that the habit also existed in two localities in Tyrone, but to a limited extent. There is no information how the people of these localities have become aware of the intoxicating effects of this drug. Instances of its excessive use have occasionally appeared in foreign journals dealing with insanity, but they were always treated as rare cases. About two years ago we drew attention to a patient of Dr. Christian, described in the *Annales Médico-Psychologiques*, September 1886. This man used to intoxicate himself with ether. It often ended by his getting into a fight or making a disturbance, when he was arrested by the police and passed into a lunatic asylum. Dr. Ritti, of Charenton (*Annales Médico-Psychologiques*, January 1888) has described another victim to this drug. This was a lady who, when twenty-two years of age, had, under medical advice, used ether in syrup for fainting fits and menstrual disorders. Twenty-two years later she returned to it for similar complaints, using at last as much as 215 grammes a day. After the inhalation of ether she would pass into a state of drunkenness, wandering about the streets. Her moral character degenerated and she came at last to beggary. After four years' abuse of ether she was sent to the Asylum at Charenton, where she passed six months, when she was dismissed cured. Since her discharge she appears to have abstained from further indulgence in ether. We have read of the wife of an American physician who used chloroform for the purposes of intoxication, consuming sometimes as much as half a litre in the day. This custom in the end proved fatal to her. In the *Annales Médico-Psychologiques* for July 1887 we have the report of another American, Dr. Shoemaker, who studied the effect of ether upon himself. He described it as sombre and disagreeable. This cannot be the case with everybody, else ether would not be used to the extent to which it has been in Ireland.

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* Stockholm. *Nordiskt Medicinskt Arkiv*, Band xx., No. 3. 1888.

In an article on 'Aetheromania' in the *Irrenfreund*, Nos. 10 and 11, 1887, we are told that the first observed case of the abuse of this medicinal agent for intoxication was published by Dr. Ewald, of Berlin, in 1875. The *Irrenfreund* reproduces the original paper. Dr. Ewald made a careful study of his patient. A wild, worn-out looking man presented himself at the hospital at Berlin, smelling of ether. He complained of exhaustion, want of appetite, and trembling of the muscles. He was known in Berlin as Der Aether-Fritze, and was now 32 years of age. Ten years before he had been a sober and respectable man. Becoming deeply engaged in philosophical and æsthetic studies, he had been attracted by a popular description of the effects of the drug, in which it was said that it heightened the fancy and quickened mental activity. On this account he tried the inhalation of sulphuric ether, which he described as having an effect upon him somewhat like that which follows hashisch. He thought he had measured whole worlds and lived through endless time, but he found on awakening that scarcely a quarter of an hour had elapsed. Though his next experiences were less agreeable, he continued to use the drug and to require it in increasing quantities. At last he became a regular ether sot, spending whole nights in the open air and haunting the different apothecaries' shops, in order to collect in small doses the enormous quantity of ether which he required to bring him into a state of intoxication. Dr. Ewald took the occasion to study the effects of ether upon this man. It was found that he needed 207 grammes of ether to make him insensible, and soon passed out of this stage. On allowing him the free use of ether he soon made himself intoxicated, when the pulse became fuller and stronger, rising from 72 to 80. The breathing became quickened, he talked nonsense, laughed, and ran about the room. There were hallucinations of a mystic character not defined. There was dilatation of the pupils. No alteration was found in the character of the urine, which was carefully examined. His breath continued to smell of ether for eight days after he had ceased to use it. He was treated with tonics and cold baths. The result is not given.

It does not appear at all likely that intoxication by ether will supersede to any considerable extent the ordinary stimulants, such as wine, spirits, and opium. W. W. Ireland, M.D.

Article 1552.

TREVES, DUNLAP, AND STOLYPINSKY ON THE TREATMENT OF CONGENITAL UMBILICAL HERNIA AT BIRTH.

Abdominal section and herniotomy on the newborn child are serious operations which have as yet been but seldom undertaken. In 1881 Mr. Frederick Treves operated on a child sixty hours old for strangulated congenital umbilical hernia.[*] The operation would have been performed a day earlier had the surgeon's advice been strictly followed. The small intestine was adherent to the margin of the opening and to a small portion of the sac-wall, but the cæcum was extensively adherent to the sac. As the gut was much distended with flatus, a hypodermic syringe was thrust into it; the piston was then removed, and the gas allowed to escape. Then the gut was reduced. The operation was performed under chloroform. The infant made a good recovery, but three weeks later it was attacked with diarrhœa, and died somewhat suddenly in convulsions. At its death the cicatrix of the operation wound was firm and well healed, and there were no signs of obstruction.

Since this case was reported three instructive and successful operations have been performed on infants one hour, or a little under one hour, after birth. All these operations were abdominal sections, practised in preference to simple herniotomy in cases of congenital umbilical hernia. In the first case the operator was Dr. Dunlap, of Springfield, Illinois, U.S.A. A report of the operation will be found in the London Medical Recorder, Feb. 20, 1888, p. 50.[†] The intestines from the duodenum to the sigmoid flexure lay in the sac. The abdominal walls were so contracted that reduction after simple herniotomy seemed impracticable. It must here be remembered that no chloroform or other anæsthetic was given; the child appeared to show no signs of pain or shock. The abdominal cavity was opened, the intestines reduced, and afterwards the wound was sewn up, the infant recovering speedily. The second case of the same kind has recently been published by Dr. Stolypinsky,[‡] of Kasan. Dr. Phaenomenoff was the operator. The hernia formed a big swelling, so transparent that the coils of intestine could be seen through it. The cord ran on to the sac, and had been carefully ligatured four fingers' breadth above it. The infant was chloroformed. Simple incision of the neck of the sac proved insufficient; the abdominal wound, which had been made a little to the left of the middle line, was therefore enlarged. As in Mr. Treves' case, the intestine adhered to the sac; so firmly, indeed, at one point that a piece of the sac had to be excised and left on the surface of the gut. Reduction then proved easy. The sac was excised. The parietes and the umbilical ring were united by four deep and three superficial sutures, the former being passed through the peritoneum. The patient made a good recovery. Drs. Stolypinsky and Phaenomenoff believed that an infant so young had never been subjected to anæsthetics before this case.

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[*] *Lancet*, vol. i., 1881, p. 323.

[†] Original source, *Jour. of American Med. Association*, Jan. 14, 1588, p. 57.

[‡] *Centralbl. für Gynäk.*, No. 11, 1889.

Dr. Stolypinsky noted that Dr. Felsenreich, about seven years ago, successfully performed this operation on a child seven hours old. The sac was cut away. The integuments over the hernia were so thin that, as in Dr. Phaenomenoff's case, the coils of intestine were seen through them. The sac and abdominal walls were united by means of twelve silk ligatures.

No subtle distinction between herniotomy and laparotomy can be conveniently drawn, as in both cases the peritoneal cavity is opened, and in the kind of hernia now under consideration, the incision is in the middle line, just as in an ordinary abdominal section. Laparotomy—that is, a free incision, by which the parts concerned can be well explored—is probably preferable to the more limited incision requisite for simple herniotomy. Excision of the sac is always advisable, as it is thin and liable to slough with the stump of the cord. The experience above recorded shows that abdominal section is well tolerated by the new-born child, and that it perfectly fulfils its aim in curing congenital umbilical hernia.

This form of hernia is decidedly rare. Thudichum estimated that it occurs about once in 2,000 infants. In Dr. Phaenomenoff's case the umbilical cord was nearly two feet in length. It was attached far from the centre of the placenta, and bore two false knots. Near the transparent hernial sac, into which it ran, it was very thick, through great development of Whartonian jelly. The condition is teratological, and is exceedingly common in acephalous acardiac monsters. Dr. Chadwick, of Boston, has investigated this subject in his pamphlet on *Rare Forms of Umbilical Hernia in the Fœtus*, and Mr. Treves has referred to Dr. Chadwick's opinions on the precise seat of the sac in these cases. Authorities seem divided as to whether the sac is actually in the substance of the cord. Gross and Astley Cooper, as well as Chadwick, thought otherwise. Mr. Treves, in the paper already quoted, declared, on the other hand, that in such recorded cases as he had been able to find, five at least, as well as his own, presented the sac in the substance of the cord itself. The same was clearly the condition in Dr. Phaenomenoff's case. All these cases occurred in children born alive; but the reporter found a congenital hernia actually in the substance of the cord, in an acardiac fœtus which consisted of nothing but left lower extremity, one kidney, and the large intestine (*Trans. Obstet. Soc.*, 1889, Part I.). The cæcum and colon occupied the sac.

According to Mr. Treves' researches into the literature of congenital umbilical hernia, strangulation only occurred in two cases, his own and a second reported by Mr. Stanley in the *Medical Times*, vol. ii., 1852. In this form of hernia the cæcum, with more or less of the ileum, is usually in the sac. The thinness of the sac-wall has often been observed before Phaenomenoff's case. It contraindicates expectant treatment or any operative measure without excision of the sac. Compression by bandages, either in the sense of a truss, or as dressings after herniotomy, would only hasten the process of sloughing, which must naturally take place in the sac as part of the umbilical cord. The thin, degenerate sac ruptured in one instance soon after birth, the prolapsed intestines were successfully reduced. (*Lancet*, vol. i., 1873, p. 829, and Treves, *loc. cit.*) In all cases the tumour seems to have been noticed at birth, and in two a loop of gut was included in the ligature applied to the cord, with fatal results. More collective and statistical information, collected since the publication of Mr. Treves' paper, is to be found in Felsenreich 'Zur Operativen Behandlung der Hernia Funiculi Umbilicalis.' (*Wiener med. Presse*, 1883, No. 17.)

ALBAN DORAN.

ARTICLE 1553.

HEYDENREICH ON TROPICAL BOIL.

DR. HEYDENREICH, the eminent pathologist of St. Petersburg, having been ordered by the Czar to proceed to the Transcaspian provinces for the purpose of reporting on and investigating the causes of the prevalence of a disease which had received in the army there the name of 'Penjdeh Boil,' has published the result of his observations, clinical and pathological, made on the spot and in the laboratories at Tiflis and at St. Petersburg, in a volume of 116 pages, with numerous plates. The work itself is in Russian, but an abstract of it is given in the *Centralblatt für Bakteriologie und Parasitenkunde*, Band v., No. 5 (Jan. 25, 1889).

He proposes to substitute the name of 'Tropical Boil,' since he is satisfied that it is the same as is familiar to the medical officers of the British army as the 'Delhi Boil,' to those of the French army in Algeria as the 'Bouton Biskra,' and to others by a multitude of local designations. His description of the symptoms and course of the disease is full and admirable in every way, but we need not reproduce it, since it has been well described by Surgeon-General John Murray, in the *Trans. Epid. Soc.* and elsewhere, though, strange to say, it is not even mentioned in Sir W. Aitken's great work on Medicine.

Dr. Heydenreich conclusively proved the existence of a specific and pathogenic microbe, and, by a long series of experiments, the communicability of the disease by direct inoculation, alike of the fluid from the boils and of artificial cultures of the micrococcus, which was invariably present in greater or less numbers in the pus, blood, urine, and the epidermis or scabs. The inoculations were performed on 27 patients already suffering from it (auto-inoculations), and on 41 animals, including 25 rabbits, 11 dogs, 3 fowls, and 1 horse and sheep. By varying the quantity and the quality of the culture fluids injected, he was able to reproduce at will every form and degree of the phenomena seen in the natural disease in man, and which have been represented, as in the case of glanders and farcy, as essential differences instead of mere degrees of severity. The internal lesions of the spinal dura mater, paralyses, increased reflexes, and in the later stages paralysis of the intestine and bladder which occur in chronic cases, were likewise experimentally induced. These are of special interest as indicating the importance of early destruction of the primary focus. Inoculation or infection was without difficulty produced by rubbing the fluid discharges or cultures on abraded surfaces, showing the contagiousness of the disease and explaining its endemic character among the lower classes in certain localities.

Its parasitic nature being established, the relative efficiency of germicidal applications assumes the highest clinical value. Dr. Heydenreich found that the micrococci in his cultures were killed by sublimate solutions of 1 in 5,000, though not by 1 in 20,000. This agent is by far the most certain, and in solutions of 1 in 2,000 or 2,500, which surgeons are in the habit of using, would no doubt prove safe and certain. Carbolic acid, 1 per cent., destroyed the micrococci in about an hour. Sulphate of iron and hydrochloric acid were slow and uncertain in their action even in solutions of 1 per cent. For the disinfection of clothing a temperature of 60° C., maintained for fifteen minutes, or of 100° C. for five minutes, would generally suffice.

E. F. Willoughby, M.D.

Article 1554.

RECENT OBSERVATIONS ON EXTRA-ARTICULAR SUTURE OF FRACTURED PATELLA.

It has often been felt by surgeons that the results of treatment of transverse fracture of the patella are by no means satisfactory, and we are glad to see the subject ventilated afresh. At the Royal Academy of Ireland on Feb. 22, Mr. Myles described a method which he had devised of suturing the fragments by passing a strong pin transversely through each, and then bringing these together by a figure-of-8 suture. Very little force was required to bring the parts in apposition, and they remained thus in thorough contact until bony union was secured. One great advantage was claimed for this method—that the pins did not pass into the joint.

Mr. Mayo Robson, in the *Brit. Med. Jour.* of March 30, states that he has adopted in two cases a very similar method which he devised last year, as he was not satisfied with the ordinary treatment and its results, though he has had no reason to regret having sutured the fragments by wire—an operation which he, however, does not think devoid of risk. The method he now adopts consists in passing a steel pin through the aponeurosis immediately above the upper fragment, then one through the aponeurosis immediately below the lower fragment—that is, through the upper part of the ligamentum patellæ. The two fragments are then easily drawn into apposition by a ligature over the pins (not by a figure-of-8 ligature over the patella, as in Mr. Myles's plan). The extra portions of the projecting ends of the pins are cut off, a layer of antiseptic gauze is placed over the projecting pins and ligatures, and a pad of antiseptic wool bandaged over the whole, the limb being placed on a back splint. The dressings are not disturbed for a month, when the pins are removed and a plaster-of-Paris bandage is applied to keep the knee from bending for a little time longer. If there is much effusion of blood into the knee, the joint is aspirated before bringing the fragments together.

In the treatment of fractured patella it appears to us that the first indication is to get the parts into accurate position, and the second is to retain them there until union has taken place. For the first of these principles it is impossible to ensure a proper adaptation of the broken bone while the joint is full of fluid, and no doubt a larger or smaller wedge-shaped gap is often left when the ordinary strapping or knee-cap in leather is used, even if a certain amount of the swelling is allowed to subside. We cordially agree, therefore, with Mr. Mayo Robson's advice to aspirate before using the means of fixing the fragments in good position. Whether the pins be made to transfix the bone or the tendinous structures above and below, will no doubt be a matter of preference by different surgeons, and will probably depend upon the chances of troublesome fistulæ resulting, but we have no fear of excrescences of callus towards the joint becoming any serious obstacle to the adoption of this attempt to gain bony union. In some cases we feel that a further step may become advisable, and the torn lateral aponeurosis may require suturing, but this must be rarely needed when parts have been accurately brought together by these simple but practical means. We cannot help feeling that an important step has been made in the rational treatment of a simple but troublesome injury, and that it is more likely to meet with approval than primary suture of the fragments or the use of Malgaigne's hooks, which have been adopted in surgical practice with more frequency in recent times abroad.

W. W. Wagstaffe.

Article 1555.

CORNET ON THE DIFFUSION OF THE TUBERCLE-BACILLUS OUTSIDE THE BODY.*

An abstract of some exceedingly interesting experiments upon this subject by Dr. Cornet appears in *Centralbl. für Bakteriologie*, Feb. 8, 1889. The main points of the research are as follows: The author removed the dust from the walls behind the beds of tubercular patients in various institutions, and from those parts of the walls of the wards where there was no probability of direct mixing up with it of dry tuberculous sputum by expectoration. With this dust in sterilised broth he injected the peritoneal cavities of healthy animals, with the result that they died in the course of time with typical bacillary tuberculosis. If the dust had been previously sterilised it was found that the animals were unaffected by the injection; but if to sterilised dust dried and powdered tubercular sputum had been previously added the animals died tubercular.

These experiments were performed with dust obtained from hospital wards, and from rooms in other public institutions, from private houses, and in one case from a hotel room in which a tubercular patient had lived for a long time.

The author proceeds to draw a good many important conclusions from his researches, and to lay down in minute detail rules and regulations which he thinks ought to be carried out to prevent the propagation of tuberculosis:—

That the tuberculous patient is not a source o danger as long as his sputum is judiciously got ri of, and his effects and living-rooms are properly dis infected; and that the choice of a place of treatment ought to depend upon the way in which rules to this end are made and carried out.

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* *Zeitschrift für Hygiene*, vol. v, 1888, p. 191.

That the virility of the dust remains for a long time after the removal of the phthisical patient from the room; in one case he proved this in dust taken from the wall six weeks after the removal from the room of a tuberculous woman.

That it is possible that when several cases of tuberculous disease occur in a family they may be explained, not, as is usually done, by the theory of heredity, but by that of infection from the dust of he living- and sleeping-rooms. The author thinks ittle of the idea of a special tendency to consumpion.

The author believes that (at any rate in most cases?) the bacilli in the dust of the rooms come rom the dried and powdered sputum and not from he exhalation of the patient. He deprecates the ractice of spitting into the handkerchief, as that is sure way of drying up the sputum, and also trongly condemns spittoons containing sand or awdust for the reception of the sputum. The putum should rather be received into covered pitting vessels, and should not be allowed to dry.

Phthisical patients should be kept separated, he utensils used by them should be sterilised, and be walls of the rooms in which they live should be leaned with bread. Direct or indirect contact with e mouths of the phthisical should be avoided. fter the death of a phthisical patient all of his elongings should be disinfected. The scattered read crumbs used in cleaning the walls should be emoved by careful scrubbing of the floors with soap, ye, and water.

The greatest care should be exercised in protecting a family hitherto intact from tuberculous infecion. Phthisical mothers ought not to nurse their hildren at the breast. Wet nurses should be carelly selected with reference to their freedom from uberculosis. Cow's milk should be obtained only rom places inspected by the veterinary surgeon. he kissing of children by strange people and the cking of dogs are to be forbidden. Again floors hould be washed, not swept; they should not be anded. Walls should be cleaned with bread. There s danger even in books from the lending library lest e phthisical should have coughed upon them. octors must themselves beware lest they be the preaders of the disease. Free disinfection-ovens hould be established in every community. Special ospitals for the treatment of patients with diseases f the chest, such as already exist in England, hould be established by the State. To the State lso accrues the duty of limiting bovine tuberculosis nd eventually swine tuberculosis. The disinfection f beds should be regulated, and also the trade in gs, lest in this way the virus be introduced.

[The observations of Dr. Cornet are most valuable, nd the rules which he lays down as to the prevenion of the spread of tuberculosis, even if somewhat inute, and partly inapplicable to English hospitals nd homes, are not the less to be carefully noted. t seems almost certain that the walls of hospital ards ought to be cleaned down more often than hey are at present, and that the sputum of phthisical atients ought to be carefully disinfected or burnt. t is useless to shut one's eyes to the danger of the irect propagation of tuberculosis from the sick to the ell in the ways indicated by the result of these xperiments. It is somewhat remarkable to learn that, with the exception of a hospital recently established in Berlin, no special hospitals for the treatment of lung diseases exist in Germany. In London alone we have no less than four, with accommodation for 615 in-patients, viz., City of London, Victoria Park, 164; Brompton, 321; North London, 50; Royal, City Road, 80. In the provinces there are several others.—*Rep.*] VINCENT D. HARRIS, M.D.

ARTICLE 1556.

MĪLĔĔFF ON THE PURGATIVE EFFECTS OF GLYCERINE ENEMATA AND SUPPOSITORIES.

IN the *Novosti Terapii*, No. 4, 1889, p. 49, Dr. F. F. Mīlĕĕff, of St. Petersburg, details his extensive experience concerning the use of small glycerine enemata and suppositories in habitual constipations of various kinds. The main results of his observations may be condensed as follows:—

1. In those cases where accumulation of fæcal masses takes place in the lower portion of the large bowel, a rectal injection of 1 or 2 drachms of pure glycerine in an adult, and of ½ to 1 drachm in a child, is invariably followed by stools occurring in two or three minutes.

2. The fæcal masses do not show any signs of liquefaction or even softening; still, owing to lubricant properties of the drug, the act of defecation proves to be fairly easy and comfortable.

3. The enemata do not give rise to any slightest painful or unpleasant sensations about the rectum. Neither do any phenomena of rectal irritation supervene, even on a prolonged employment of the injections.

4. The purgative effects of glycerine should be attributed to its stimulating action on the nervous and muscular apparatus of the large bowel, which action is, probably, determined by the drug greedily extracting water from the intestinal mucous membranes with its nerve-fibres. The desiccation irritates the latter, and thus excites a reflex contraction of the intestinal muscular coat. The hypothesis finds a strong support in the fact that any dilution of glycerine with water markedly weakens its purgative action, and that the more in proportion the larger is the amount of water added.

5. Glycerine enemata are especially indicated (*a*) in the constipations of pregnancy, where ordinary water enemata are inconvenient on account of their considerable bulk, which causes discomfort to the woman; and (*b*) in infantile constipation caused by unduly prolonged feeding on milk alone, and associated with fæcal accumulations in, and consecutive distension of, the sigmoid bowel. In cases of the kind, glycerine enemata are very useful on account of their energetic action in the intestinal muscles, and convenient because of their small bulk.

6. As to glycerine suppositories (containing half a drachm of the drug each), they are said to act well (in five minutes or so) only in such cases where no pure glycerine enemata were previously employed, otherwise they remain inactive. Hence, Dr. Mīlĕĕff is accustomed to commence the glycerine treatment of constipation with suppositories (a piece at bedtime), and passes to enemata as soon as the former cease to secure the result desirable.

7. As regards the apparatus for the enemata, Dr. Mīlĕĕff thinks that any special contrivances are quite superfluous. At all events, he uses for the

purpose an India-rubber urethral syringe with a piece of thick-walled elastic-tube on the nozzle.

[*Cf.* Dr. A. S. Polübinsky's paper on the subject in the LONDON MEDICAL RECORDER, March 1889, p. 91. In the *Brit. Med. Jour.*, Dec. 22, 1888, p. 1424, Dr. George Grewcock, of Brighton, says that he 'found out quite accidentally a novel method of applying glycerine,' which is 'equally efficacious with the clyster.... If a piece of cotton-wool alone, the size of a nut, is well saturated with glycerine, and inserted as a suppository, in a short time a copious motion is produced.' Certainly it would be worth while to give a fair trial to the plan which makes superfluous any appliances, including Dr. Mīlëëff's urethral syringes.—*Rep.*]

V. IDELSON, M.D.

ARTICLE 1557.

AFANASÏEFF AND SCHULZ ON THE BACTERIOLOGY OF ACTINOMYCOSIS.[*]

AT the third general meeting of Russian medical men at St. Petersburg, Professor Mikhaïl I. Afanasīeff and Dr. Nadejda K. Schulz (a lady), of St. Petersburg, have communicated (*Transactions of the Meeting*, 1889, Nos. 2 and 6, pp. 43 and 183) their very valuable and elaborate researches concerning the etiology of actinomycosis and the bacteriology of its pathogenic microbe.

The authors have succeeded in isolating the latter in the state of a 'pure cultivation.' Given a pure (*e.g.* broth) culture of the microbe, it proves to consist of characteristic grains, which are identical, both macroscopically and microscopically, with those as found in actinomycotic products in man. The grains vary exceedingly in their size, some being hardly perceptible to the naked eye, while others are from 0·1 to 1 millimètre in diameter. Under the microscope they represent a felt-like structure composed of extremely fine (about 0·5 millimètre in breadth), slightly wavy, dichotomising and interweaving filaments which, to all appearance, start from a common centre to run towards the periphery of the grain in a radial way. The smallest granules, however, are composed only of a few wavy and ramifying threads, forming a kind of little star. In older grains there may be observed slight terminal inflations on some threads. The authors, however, have never yet been able to detect in cultures anything like genuine terminal 'clubs,' such as occur in actinomycotic products. They are inclined to explain the circumstance simply by the fact that they conducted their researches mainly with recent or young cultures; meanwhile, as Boström and themselves have reason to believe, the clubs represent nothing but certain involutionary or retrograde forms, occurring only in more or less old actinomycotic products (pus, &c.). When a grain is sown on an agar-agar plate the growth starts, and proceeds solely from ramifying filaments, while the clubs show no signs of proliferation, or, in fact, any alterations. On the other hand, both in actinomycotic pus, and, especially, sputa, there are often met with clubless grains lying in enormous quantity side by side with clubbed ones. By the way, in old artificial cultures, as well as in old grains from pus or sputa, peculiar threads are also frequently detected, which seem to consist of rods of varying size, and of coccoid bodies (and probably constitute another involutionary form).

In common with Boström and Israel, the authors come to the conclusion that the actinomycotic microbe does not represent a mould fungus (as Harz asserted), but a member of the highest bacterial class, called *cladothrix*, and chiefly characterised by its having the shape of ramifying filaments. In view of the fact that colonies of the microbe in question have a radiary arrangement, the bacterium should be named best *actino-cladothrix*.

That the microbe isolated by the authors is quite identical with the pathogenic agent of actinomycosis in man and lower animals has been proved by their numerous inoculation experiments on guinea-pigs, rabbits, and dogs. The introduction of young pure cultures of the bacterium into the peritoneal cavity of the animals, is followed by a characteristic disease, sometimes ending in death (in guinea-pigs). As a rule, however, after a more or less prolonged illness, the infected animal makes an apparently complete recovery. Morbid products in such cases prove to invariably contain the *actino-cladothrix*. An intra-peritoneal injection of old cultures as a rule gives rise (in guinea-pigs) to a local peritonitis, ending lethally; but no *cladothrix* or any other bacteria are ever detected in purulent fluid, granulations, &c., in cases of the kind.

The growth of the *cladothrix* is so strikingly characteristic that it is absolutely impossible to mistake the microbe for any other mycotic species. For duly studying it, it is imperatively necessary to employ if possible pure materials—that is, pus or sputa uncontaminated by bacteria of any other kind; hence the sputa should be collected in a sterilised vessel, after a preliminary thorough disinfection of the oral cavity and fauces of the patient; the pus should be best extracted from metastatic abscesses immediately after an incision, and at once subjected to the examination with all sterilising precautions. When examined by the naked eye the said products are found to contain yellowish or whitish grains; the latter should be picked out by means of a platinum eye, and immediately thrown into test-tubes with broth, fluid blood-serum, meat-pepton-agar, &c. The tubes are without delay placed in the thermostat to be kept at the body temperature for from three to fifteen days. In broth tubes there soon appear grey-whitish roundish granules of various sizes, which, when the tubes are left alone, form largish conglomerates, sometimes attaining the size of a small pea. When the tube is frequently shaken the colonies retain the shape of small-sized globules, which continue to steadily multiply for about a month; later on some of the globules become surrounded with a mucoid substance and sink to the bottom, while others rise up to the surface and undergo calcification. When the cultivation-material has been quite pure, the broth remains clear and limpid all through.

On a levelled surface of meat-pepton-agar the growth proceeds comparatively very slowly, the first indications not being distinctly observed before the fifth day. The grains lying just under the surface become knobby and rise slightly above the level, but do not increase in breadth, and soon cease to grow altogether. When such grains are rubbed into a slanting surface of meat-pepton-agar, or blood-serum, and the tube is placed in the incubator at the body temperature, there appear, in from two to four days, minute granules scattered over the surface; they steadily increase in number and size, invariably remaining exactly like the grains met in antinomycotic products in man. When grown on blood-serum they have almost always a yellow or even a bright yellow colour; they do not liquefy the media, nor destroy their transparency. Old agar and blood-serum cultures (of two months' standing and upwards) usually show signs of calcification; they sometimes, however, retain their vitality for a twelvemonth. Once commenced in the incubator at the body temperature, the growth on any medium can subsequently proceed at the ordinary room temperature.

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[*] AFANASÏEFF, PROFESSOR MIKHAÏL I., and SCHULZ, DR. NADEJDA K.—A Contribution to the Etiology of Actinomycosis (*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, 1889, Nos. 2 and 6, pp. 43 and 183.)

Any contamination by other bacteria (streptococcus pyogenes, staphylococci, &c.) interferes very much with the growth of the *actino-cladothrix*, since the former begin to proliferate far more rapidly than the latter, and soon not only encircle the actinomycotic colonies, but even penetrate into the grains themselves, and altogether make a pure cultivation of the *cladothrix* quite impossible. The ordinary (Koch's) methods of isolation of individual bacterial species prove here inefficient. A pure cultivation can only be accomplished by resorting to the following precautions, devised by the authors: 1. It is necessary to take about ten large glass plates with solidified meat-pepton-agar. 2. The grains should be picked out (from pus or sputa) in a large number (50 or 100 or more), and distributed over the plates at a distance of from 3 to 5 centimètres from each other. 3. The plates (placed in the thermostat) should be carefully examined by means of a magnifying glass every day, in order to make out which grains remain pure and which get contaminated. 4. The pure ones should be protected from contamination by removing them to another plate with a freshly prepared medium. 5. If the selected colonies show no signs of contamination for from 4 to 6 days, they are then to be subjected to further cultivation experiments after the method already indicated.

The authors believe that they have been the first observers who have succeeded in obtaining the *cladothrix* in a really pure cultivation. According to their opinion, both Drs. Boström (*Transactions of the General Meeting of German Physicians at Wiesbaden*, 1888) and P. Kishensky (*Meditzinskoië Obozrenīē*, May 1888, p. 989) had to deal with contaminated cultures.

[In his 'Advances of Bacteriology,' in *Ricker's Calendar for Russian Medical Men*, 1888, vol. ii., p. 193, Professor Afanasïeff says that he obtained his first pure culture of the *cladothrix* in the summer of 1886 from a patient of Dr. Pïotrovskï's, and another, in the beginning of 1887, from a case of pulmonary actinomycosis, in which he and Dr. N. N. Iakimovitch made a correct diagnosis on the ground of the examination of the patient's sputa. As regards clinical microscopical examination of actinomycotic sputa, or pus, the author advises: 1, to spread material over a glass-plate placed on a piece of black paper; 2, to pick out granules with a needle; and 3, to examine them in a from 1 to 5 per cent. solution of caustic potash, which dissolves everything except the *cladothrix*; 4, when stained with aniline dyes, the clubs take in the latter but very badly, while the central felt structure assumes a rich colour; 5, it is necessary to bear in mind that the *leptothrix* may sometimes occur in a similar shape of small groups or even grains. The *leptothrix* threads, however, are comparatively thick, straight, and non-ramifying, while the *cladothrix* filaments are very fine, wavy, and dichotomising; 6, on sections, actinomycotic grains may be well stained with picrocarmin, orchilla (Weigert), safranin (Babes), and then with gentian-violet, &c. The paper is illustrated by three beautiful drawings.—*Rep.*) V. Idelson, M.D.

Article 1558.

HUMPHRY ON CHANGES IN THE BONES IN OLD AGE.

In the *Illustrated Medical News*, March 1889, p. 193, Professor Humphry contributes an article on the changes in the bones in old age, and illustrates his remarks with some valuable illustrations. To the naked eye these changes consist in an absorption of the cancellous structure, commencing in the parts which are most cancellous, that is, where the bony plates are thinnest, where the marrow is most abundant and most vascular, where the leucocytic and other agents in absorption are most abundant, where, accordingly, we might expect the processes of absorption to be most ready to take advantage of any failure in the nutritive and resisting qualities of the bony tissue. In the early condition the several parts of the skeleton are solid; as they become hardened and added to at the exterior, they become hollowed out in the interior into cancellous spaces, medullary canals, and air-containing cavities; this change continues through life in gradually diminishing degree; and, as old age advances, the subtraction from the interior exceeds the addition to the exterior, and the bones gradually decrease in weight and strength. The muscles at the same time become weaker, so that it is almost as rare to have a spontaneous fracture of a bone from muscular action in old age, as it is in youth or middle age. The author shows by diagrams how in old people the head of the femur becomes thinned and liable to fracture. This predisposition to absorption in the cancellous parts is met with in the ends of the long bones in all aged people, which causes their liability to fracture. The tendency to absorption of the cancellous parts of the skeleton is also seen in the alveolar processes of the jaws, whereby the teeth are loosened and often drop out. In the body of the lower jaw these changes are very marked; the thin lower bar alone remains with the mental foramen upon or near the upper edge; in the upper jaw alveolar processes become, in course of time, completely cleared away; the level of the palate is continued to the margin of the bone, the whole maxilla (the walls of the antrum more especially) becomes very thin, and the nasal spine and the cheek-bones are left outstanding in relatively strong relief. An exception to the progressive cancellous absorption and diminution of weight in the bones of old people is not unfrequently to be found in the skull, more particularly in the calvarium. This part in some cases becomes very thin and light; in others it becomes thicker from deposit on the interior consequent probably on the lessening of pressure upon it associated with the brain-shrinkage of age; in some of these latter cases it is very porous, the diplöe being increased; in others, however, it is dense and heavy, as well as thick, the diplöe being encroached upon and perhaps obliterated. The contrast in some cases presented by the thick heavy calvarium, and the thin light facial bones, is very striking; the skull of many old people weighing many ounces over the average, and this is due to increased thickness and density of the bones enclosing the cranial cavity. This senile thickening and 'senile sclerosis' differ from the changes in osteitis deformans, inasmuch as they affect the interior of the skull and the diplöe rather than the exterior. So far as the author knows, the cranial wall is the only part of the skeleton in which this process occurs. The increased density and weight of the skull when the rest of the skeleton is becoming less fitted to bear weight is a strange and not easily intelligible anomaly.

Richard Neale, M.D.

Article 1559.

RICHARDSON ON THE VITAL PROPERTIES OF CARBONIC ACID.

In the *Asclepiad*, February 1889, p. 77, Dr. Richardson states that carbonic acid has uses which are essentially vital, because in its absence the phenomena of life could not be effectively carried out. The author was led to the researches about to be described by the accidental observation of the effect of charging a vegetable infusion with the gas under pressure; the solution so treated became dense, ropy, and mucus-like. Following up this hint, various infusions were exposed to the gas, and the products afterwards examined. From the observation of the effects of carbonic acid on vegetable infusions, the author passed to study it experimentally in solutions of albumen, serum of blood, defibrinated blood, mucus of the bronchial surface, &c. These various infusions were put into a strong bottle, in a water bath of 100° F., and then the carbonic acid was forced into the bottle. Serum was treated in this way, and was allowed to remain three days in contact with carbonic acid. On opening the bottle, the same explosive action took place as when a bottle of ordinary aërated water is opened, and a thick colloidal mass flowed out. On opening a bottle of defibrinated blood thus treated, no explosive action took place, but on pouring the dark fluid into a wide-mouthed vessel in the open air, there was an instant change of colour from dark to brilliant red, with escape of carbonic acid and absorption of oxygen. The author states that he considers that the blood-corpuscles condense the carbonic acid under pressure, and in the absence of oxygen hold it in condensation, but so soon as oxygen is brought into contact with the blood carbonic acid is displaced by catalysis and oxygen is absorbed. If this explanation be correct, it would follow that the vital value of carbonic acid is as important as oxygen itself. When blood is burned in the body, the carbonic acid formed takes some part of the place of the oxygen until the corpuscles are saturated. Charged in this manner they reach the lungs in the proper condition to take up oxygen from the air, in exchange for the carbonic acid which they eliminate. This explanation suggests that in the process of life the presence of carbonic acid is actually necessary in order that the blood should undergo oxygenation. In another series of researches Dr. Richardson tested the action of carbonic acid on some of the secretions of the body, and specially on the mucous secretion of the bronchial passages and throat. Its effect on these secretions, under slight pressure and warmth, is to produce modified conditions of the most distinctive character in their resemblances to what are seen in disease. The clear mucus of the natural bronchial surface can be changed into the frothy-like secretion of a loose catarrh, or into the dense stringy-like secretion of chronic bronchitis, or into a membranous secretion like that which forms in croup and diphtheria. The admission of this theory of absorption of carbonic acid by the red corpuscles of the blood does away with the old idea that the carbonic acid in the venous system is carried partly by being absorbed in the water of the serum, and partly by being held in temporary combination with the alkaline bases. If the latter idea be correct, it is surprising that the vessels do not rupture under the pressure of a gas exposed to such different conditions of heat, cold, &c. But if the new reading above stated be correct, then the double function of the red corpuscles accounts for everything. The corpuscles supplement the other absorbing influences; equalise under varying states the pressure of the gas within the vessels; and prevent tensions which, without such regulation, would be a constant source of danger to life.

Richard Neale, M.D.

Article 1560.

KOWALEWSKY ON THE EFFECT OF OZONE ON GUAIACUM RESIN.*

The ozone used by Professor Kowalewsky, of Kasan, was obtained by passing a current of atmospheric air from a gasometer through a drying apparatus with concentrated sulphuric acid, and then through Von Babo's apparatus, which was driven by a Ruhmkorff inductor with two or three large Bunsen elements.

(1) If a sheet of blotting-paper, moistened with recently prepared guaiacum tincture, is hung in umbrella-form at some distance in front of the opening of the Von Babo tube, the effect of the ozone is noticed on the paper in one or two minutes in a stain of remarkable colour and shape. The latter resembles that of a comet, the nucleus being opposite to the opening of the tube, and the tail spreading downwards. This proves that ozone is heavier than atmospheric air. The paper above the opening of the tube is but slightly discoloured. Immediately opposite the opening the 'nucleus' appears as a yellow disc, surrounded by a bluish-green ring, beyond which there is a space of ovoid shape of greenish or reddish discoloration, lying chiefly on the under side of the ring. This 'field' is bounded by a blue band, narrow at the top, but becoming broader on both sides the lower it descends. Beyond this, again, is finally a similarly shaped band of a pink colour. This colouring proves that ozone produces with guaiacum resin not only a blue oxydation product, but a series of coloured products, which remain on the paper for varyingly long or short periods.

(2) The process of the formation of the coloured figure on the paper on being examined shows that the different colours do not appear simultaneously, but in a certain succession. Thus, first there is a pale greenish discoloration in the form of a comet. Then opposite to the opening of the tube a pink patch of colour appears, which retreats towards the periphery, especially on the under side, to make place for the blue in the middle. The blue again retreats to a

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* *Centralbl. für die med. Wissensch.*, No. 5, 1889.

periphery, to be lost opposite the opening of the tube. Thus the blue represents a certain stage of the oxydation of the resin intermediate between the different-coloured and more or less oxydised products.

(3) Perfectly dry guaiacum paper cannot be coloured by ozone. But if a portion of the paper be moistened with distilled water, that portion will be coloured. Hence, to obtain the above-named results, guaiacum paper must be used in which there remains a little of the alcohol, and with it water. What it is in the water that makes it indispensably necessary in the experiment, it is difficult to say. Possibly it decomposes a molecule O_3 into O_2 and O_1, and this active O *in statu nascendi* acts upon the resin.

(4) If perfectly dry guaiacum paper be exposed to the influence of ozone for one or two minutes, and be then removed from the apparatus and moistened with distilled water, it takes the blue colour, and retains this power even if the moistening is delayed for a quarter of an hour or more after removal. On the other hand, distilled water through which ozone has been conducted for several hours (*e.g.* two-and-a-half hours with 10 cubic centimètres H_2O), has no effect on dry, not ozonised, guaiacum paper. These experiments show, firstly, that ozone is condensed and caught up by finely distributed resin, but not by water, and, secondly, that condensation alone is not sufficient to oxydise the finely distributed guaiacum resin.

(5) If moist guaiacum paper be sprinkled with old turpentine, the places thus sprinkled smoke in front of the ozone apparatus, but do not colour. As ozone passed through turpentine produces only a vapour, at the same time losing its specific odour, and does not colour moistened guaiacum paper held before it, we must conclude that turpentine binds ozone or its active atom.

(6) A remarkable analogy is found in the effect of iodine on guaiacum paper. If a small piece of iodine be laid on damp guaiacum paper, a blue ring is formed round it, having sometimes a faint rose-coloured line of demarcation. On the parts round the iodine being moistened with distilled water, the reaction grows stronger, the blue colouring becoming darker and more extended. Completely dry guaiacum paper does not exhibit this reaction. If the damp paper has been sprinkled with old turpentine there is no pale ring round the iodine, but a slight vapour is seen, as is the case too when a small piece of iodine is simply held over a drop of old turpentine. All these phenomena support the theory of the action of iodine on oxygen. Kowalewsky has not yet succeeded in separating ozone from iodine vapours on a large scale. The reaction of iodine on damp guaiacum paper is so true that sometimes minimal quantities of iodine can be detected in solutions.

John Elliott.

The idea having gained general currency that the use of saccharin is injurious, the following report has been published by Dr. Thomas Stevenson, official analyst of the Home Office:—1. Saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in any ordinary dietary. 2. Saccharin does not interfere with or impede the digestive processes when taken in any practicable quantity. 3. His personal experience is that saccharin may be taken for an extended period without interfering with the digestive and other bodily functions; hence there is no reason to think that its continued use is in any way harmful.

Article 1561.

STICKER ON THE TREATMENT OF PTYALISM.

Dr. Georg Sticker contributes the following to the *Deutsche med. Zeitung*. First and foremost, it is of course necessary to inquire into the cause of the disease in each case. The removal of local or more remote causes of mischief is according to the general or particular rules of treatment, as, for instance, the extraction or stopping of diseased teeth, the curing of primary catarrh of the mouth, the treatment of trigeminus neuralgia, and the dealing with diseases of the stomach, intestine, and womb. Amongst specially recommended modes of treatment there is the grape-cure in cases of ptyalism from diseases of the intestine, particularly if there be constipation. From 2 lbs. to 3 lbs. may be taken daily for five or six weeks. Others recommend in similar cases magistery of bismuth, and Karlsbad water is also highly recommended. Undoubtedly chlorate of potash (Chlor-Kalium) is, in the form of a gargle, a sovereign remedy for curing inflammation of the mouth caused by mercury. Arsenic is more certain in its effects on the ptyalism of malaria than quinine, except when the ptyalism is typically intermittent, as intermittens larvata. In the latter cases, as well as in the 'intermittent ptyalism of rheumatic subjects,' large doses (two grammes) of quinine should be given. When the cause of ptyalism cannot be removed, as, for instance, in cancer of the stomach, or when it is not safe to interfere with it, as in pregnancy, or when ptyalism has, so to speak, emancipated itself from the original cause and become independent, the way is open for symptomatic treatment. Thus astringents are of value generally in more obscure cases of ptyalism (gargles of alum, sulphate of zinc, sage, oak-bark, and Peruvian bark). In ptyalism from a cerebral cause blisters on the back of the head, throat, and nape are useful, as are blisters and leeches on the mastoid process in ear disease. If there be considerable diminution in the volume of urine, give such diuretics as squills, juniper, and salts of potash (*Kalisalze*). Especially in ptyalism during pregnancy mild aperients are of great value. Sometimes it is advisable to choose the sudoriparous glands as the point of attack, stimulating them with such drugs as pilocarpine, which do not at the same time affect the innervation of the salivary glands. On the other hand diaphoretics which possess diuretic properties in addition to their main character are advisable—*e.g.* camomile, elder, and lime-tree flower tea.

Heidenhain's discovery of the paralysing effect of atropin on the salivary nerves has also been turned to good account in practice, the drug being a specific in ptyalism of a cerebral origin. Yet the old-fashioned prescription of opium in small doses (0·02 gramme) at frequent intervals (two hours) holds its ground. Oppolzer finds opium invaluable in cases where no cause for ptyalism can be discovered. Spiegelmann recommends tonics (Peruvian bark, iron, and cod-liver oil) in the ptyalism of pregnancy. Harkin (*Lancet*, Oct. 1, 1887) says that chlorate of potash (*das chlorsaure Kalium*) given internally three times a day in two-grain doses so restores the equilibrium of secretion in the salivary glands that it both increases defective secretion and reduces hyper-secretion, thus acting as a regulator on the functions of the glands.

Oppolzer says it is very necessary to forbid a patient suffering from ptyalism to swallow his saliva, in order to prevent serious disturbances of the digestion. Lastly, there are cases in which ptyalism resists all treatment, and others in which cessation of ptyalism causes obstinate diarrhœa. This latter fact is explained by P. Frank by the vicarious action of the pancreas. JOHN ELLIOTT.

ARTICLE 1562.

MASSAGE IN GYNÆCOLOGICAL TREATMENT.

MASSAGE as a method of treatment has of late years assumed an importance possibly somewhat in excess of its real claims, and the fact has been turned to useful account by a large number of people who have found it a remunerative occupation, not entailing too long or too laborious a period of apprenticeship. Like most other remedies of restricted utility which have suddenly become popular, it has been, and still is, prescribed under circumstances and for purposes, for which it is not adapted, with the inevitable result of causing a certain prejudice against it among those who profess to proceed only upon scientific bases. It is a purely empirical practice, and the attempts to give it a sound scientific foundation have not been singularly successful. Little of it has been heard at the medical societies, probably because those who resort to it most are not those who seek the approbation of their fellow professional men in order to control their results. Although by no means a method of treatment peculiarly applicable to gynæcological practice, it soon came to be largely applied in the obscure cases, as to which until recently we knew remarkably little, but respecting which gynæcologists in various parts of the world have been very prolific in methods of treatment. At a recent meeting of the British Gynæcological Society, a paper on the subject was read by Dr. Macnaughton Jones, which professed to deal with the subject as a whole, and the paper gave rise to a very animated discussion which served to make clear the objections that are entertained to the practice as at present carried out. The author deprecated *en passant* that particular variety of massage known as 'massage of the uterus.' Nothing was further from the author's purpose than to elicit an attack upon the practice of massage, which he evidently holds in great esteem, but his remarks upon this subject served as the *point de départ* of a series of statements which showed how repugnant such practices were to the minds of most of those present. Viewed dispassionately, the arguments against massage apply rather to the abuse of massage, *i.e.* its application to unsuitable cases, than to the practice when carried out *secundum artem.* It is obvious that the fact that the treatment is unsuccessful when applied to cases of pyosalpinx or extra-uterine gestation, is no argument against its employment in sundry other conditions less amenable to direct surgical interference. It is not impossible that the violent opposition which the system has met with at the hands of operating surgeons, is due to the belief that they are thereby defrauded of the opportunity of treating a large number of cases in which they consider they could effect a cure by operative measures. Dr. Macan, as became the master of the Rotunda Hospital, took a more robust view of the matter, and urged that the subject was not one calling for such a display of feeling. He even slyly suggested that the cry against massage on the ground of outraged morality might perchance have something in common with the virtuous indignation of Mrs. Dr. Grundy, when the speculum was first unfolded to the by no means admiring gaze of the profession in this country. On the whole, his view of the matter commends itself to unprejudiced and disinterested observers, viz., that however desirable it may be to check the practice of the art by irresponsible persons, of whose capacity and morality one knows nothing, the matter was one which might fairly be left to the discretion of individual practitioners. He urged that if a course of uterine massage were necessary to bring about recovery in cases which had proved, or would prove, refractory to other methods of treatment, short of the removal of one or more of the pelvic organs, then there was no real reason for declining to have recourse to the method, even if only *à titre d'expérience.* It would be obviously unjust to brand massage as quackery pure and simple. Quackery consists rather in the manner of applying a method, and the object for which it is employed, than in the method *per se*; and while indiscriminate resort to it is to be unhesitatingly condemned, neither the practice itself, nor the persons who endeavour to make use of it in a reasonable and proper way, should be placed under a ban. The remedy lies largely in the hands of medical men. If they will cease to send on troublesome cases to institutions of which they know nothing, in order to undergo a course of treatment at the hands of persons whose only title to pose as *masseurs* or *masseuses* consists in the payment of a few pounds to some self-constituted professor of the art, the evils complained of would largely cease to exist. It would, however, not be amiss if the subject were seriously taken up at the various medical societies with a view to determine what cases, and for what indications, massage may be properly employed.

ALFRED S. GUBB.

SURGERY.

RECENT PAPERS.

1563. ABBE.—The Surgery of the Spine. (*New York Medical Record*, Feb. 9, 1889.)

1564. MACCORMAC.—On Plastic Surgery. (*Birmingham Medical Review*, December 1888.)

1565. MAYO ROBSON.—The Treatment of Urethral Stricture. (*Provincial Med. Jour.*, November 1888, p. 482.)

1566. PEYTON.—A Case of Cerebral Cyst: Recovery. (*Jour. of the American Med. Association*, January 1889, p. 88.)

1567. BLACKWOOD.—The Cure of a Large Abdominal Hernia. (*Provincial Med. Jour.*, March 1889, p. 139.)

1568. RUBIO, F.—Resection of 8 Centimètres of the Ileum: Cure. (*El Siglo Medico*, Feb. 17, 1889.)

1569. RIBERA Y SANS, PROFESSOR J.—Intrathoracic Hydatid Cyst: Exploratory Laparotomy. (*Rev. de Med. y Cirurg. Prácticas*, Feb. 7, 1889.)

1570. WOLFF, PROFESSOR DR. JULIUS.—The Treatment of Club-foot by a Portable Silicate Bandage. (*Berliner klin. Wochensch.*, No. 8, 1889.)

1571. NÉLATON, M.—On a Case of Aneurism of the Subclavian Artery Cured by Iodide of Potassium and the Constant Current. (*Rev. de Thérap.*, March 15, 1889.)

1572. Segoud, Dr.—On Impotence Consequent on Varicocele. (*Rev. de Thérap.*, March 15, 1889.)

1573. Potherat, Dr.—On the Treatment of Hydatids of the Liver by Puncture and Injection of Sublimate Solution. (*Rev. Gén. de Clin. et de Thérap.*, March 14, 1889.)

1574. Verneuil, Professor.—On the Etiology of Tetanus. (*Rev. Gén. de Clin. et de Thérap.*, March 14, 1889.)

Art. 1563. *Abbe on the Surgery of the Spine.*—In a Contribution to the Surgery of the Spine (*New York Medical Record*, Feb. 9, 1889), Dr. R. Abbe, of New York, reports two interesting cases of operative interference for the relief of disease of the spine. The first is one of recovery from an operation for extra-dural tumour that had caused complete paraplegia. The patient was a man, aged 22, who presented a marked swelling and induration to the right of the spines of the ninth and tenth dorsal vertebræ, and suffered from rigidity and tenderness of the spine, anæsthesia and loss of power of the lower extremities, uncontrollable twitchings of the legs, incontinence of urine and fæces, intercostal pains in the lower ribs, and girdle pains in the line of the spinal swelling. There was much general debility with hectic. No history of syphilis or tuberculosis could be elicited. On May 26 of last year, after the administration of ether, an incision six inches in length was made close to the spines, from the sixth to the twelfth dorsal vertebra. The laminæ, which were bare of periosteum, having been exposed, some thick broken-down tissue mixed with pus was scraped away. The spines and laminæ of the eighth, ninth, and tenth vertebræ were then cut away. There was then revealed a dense mass of tissue and desiccated pus occupying the canal for an extent upwards and downwards of two inches and a half. This mass, by which the cord was tightly compressed against the anterior wall of the canal, was thoroughly removed by the sharp spoon until sound bleeding tissue was left on every side. The cavity was packed with iodoform gauze, after bichloride irrigation, and an antiseptic dressing and a plaster-of-Paris jacket applied. On the eighth day sensation began to return. In the fourth week the patient began to move his left leg and the toes of the right side. In six weeks he could move both legs well, and in the third month was able to get about on crutches. After an interval of eight months he could walk well without any support, and was stout and hearty. Dr. Abbe gives no information as to the precise nature of the swelling in the back. It is stated that the tumour tissue was examined for bacilli, but that nothing was found save cellular elements and pus. The tumour, it is held, began between the third and the posterior arches of the vertebræ, and then as it broke down involved the bone. The bodies of the affected vertebræ were quite sound. The second case is one of severe and intractable brachial neuralgia treated by nerve-stretching, amputation of the upper limb, and finally, with some improvement, by division of the posterior roots of the sixth, seventh, and eighth cervical nerves. The subject of this case—a man 44 years of age—when first seen by Dr. Abbe in November last, was thin and careworn, and complained of sharp pain every few minutes day and night in the stump of the right arm, and felt shooting into the hand and fingers as if they were still on. Ether having been administered on December 31, an incision was made along the ligamentum nuchæ, on the right side, from the third cervical to the first dorsal spine. The soft tissues having been quickly separated from the bone, the exposed laminæ on the right side were removed, and the full pulsating dorsal membrane of the cord was thus exposed. Through this membrane, which was soft, the cord could be readily felt. There were no indications found of inflammatory or other disease of the hard parts. The sixth and seventh cervical nerves were drawn up from their beds and cut across just outside the dura. As no relief followed this operation, forty-eight hours later the wound was exposed and opened, the dura slit up, and the eighth nerve divided close to the posterior spinal column. In the two operations Dr. Abbe cut both roots of the sixth and of the seventh nerves outside the dura, and the posterior roots of the seventh and of the eighth inside the membrane. The results of this treatment will, we anticipate, be given in some future communication, as so little time has yet transpired since the operation. The patient had, it is stated, more or less pain in the arm during the next ten days, but its character was changed, and it no longer seemed to radiate to hand and fingers. There was, according to the last report, anæsthesia of the skin of the entire outer side of the arm from the deltoid region downwards, extending across the shoulder from the centre of the clavicle to the centre of the scapula.

1564. *MacCormac on Plastic Surgery.*—In a paper read before the *Midland Medical Society* and published in the *Birmingham Medical Review*, December 1888, Sir William MacCormac stated that in respect of deformity of external parts we seem, for the present at least, to have nearly reached the limit of our efforts. Successful attempts, however, have been made in recent years to unite divided bones, tendons, and nerves; teeth, it is stated, have been transferred; actual loss of substance, the result of injury to the continuity of a nerve, has been made good by transplanting a portion of nerve taken from an animal or from a recently amputated limb, by grafting the divided nerve on to an adjacent trunk or by a species of splicing of its two ends. Pieces of bone and periosteum have been transplanted for filling up the gap in ununited fracture or for supplying a defect left after necrosis, and flaps containing both bone and periosteum have been successfully used to build up the lost skeleton of the nose. In dealing with defects on the surface of the body there are, Sir William states, two very different ways in which the flap of skin used for transplantation may be treated. It may be immediately transferred to the place it is to occupy, or the transference may be delayed for one, two, or more weeks, until the partially detached flap has become thick and vascular, and better capable of uniting in its place. For some years past Sir William has abandoned the immediate method except in certain operations for the relief of deformity of the face, as he thinks it much safer with regard to the survival of the flap to detach it, as one might say, by degrees, and only after it has acquired a vitality of its own. The better plan, it is held, is to leave the flap attached by both extremities until the stage of transplantation. By reason of the flap remaining attached at both ends, it may be cut much longer, in proportion to its width, than would otherwise be practicable without risk of gangrene; it would also become more speedily vascularised, and, after a time, when one end of it has been separated, it can be used with much greater security, and will attach itself to its new connections with greater ease and rapidity. In forming the doubly pedicled flap care must be taken not to make it too long in proportion to its width, and to leave an ample margin for shrinkage. The length of the flap should not, as a rule, exceed three times its own width. The shape and extent of the flap having been carefully mapped out on the surface with an indelible pencil, the skin and subcutaneous tissue are then cut through down to the fascial aponeurosis, leaving a base of attachment at each end sufficiently wide to provide for the nutrition of the flap, care being taken, when practicable, to carry the excisions in a direction parallel to that of the chief vessels of the region. When the flap is separated from the subjacent parts, a layer of oiled silk is passed underneath, and the part covered with cotton-wool or an antiseptic dressing. After an interval of one, two, or three weeks the flap becomes very thick and vascular, and one end may be safely divided and the flap turned into the place prepared for its reception. It usually adheres in a very short time, and there appears to be no delay or difficulty in the granulating surface of the flap adhering to the freshly cut surface. Two weeks, at least, however, are generally required for adequate vascular union to occur between the opposed surfaces. Sir Wm. MacCormac considers from fourteen to twenty-one days are necessary to properly vitalise the flap, and in some cases it may be well even then to divide the connecting base of attachment in stages—one-fourth, for instance, each day—until the separation is complete. Instances have been recorded of transplantation of a flap from one leg to the other, from the thorax to the arm and forearm, from the arm to the neck, and reference is made to a case in which Dr. George F. Shrady, of New York, transferred a flap of skin from the arm to the cheek by using a finger as a medium to transport the flap from one position to the other. W. Johnson Smith.

1565. *Mayo Robson on the Treatment of Urethral Stricture.*—In the *Provincial Med. Jour.*, November 1888, p. 482, Mr. Mayo Robson contributes a short notice of more than forty difficult or complicated cases of urethral stricture treated by rapid dilatation with Lister's graduated sounds. The treatment usually adopted, unless the symptoms are too urgent, is to give an aperient with a diluent alkaline beverage, to put the patient to bed for twenty-four hours, and then to ascertain the exact size and site of the stricture or strictures. If a small-size Lister's sound can be passed it is pushed home, then the next size, and so on, until No. 13 or 14 is reached at one sitting, and usually within five minutes. A hot blanket is at once thrown around the patient, and usually no rigor occurs; if there should be any, hot drinks are given, with quinine and boracic acid in frequent doses. If no firm instrument can be passed, a filiform bougie is used, and if a straight one fails to find its way, one with a corkscrew end will often succeed. This is tied in for forty-eight hours, when a larger one can easily be passed, and afterwards Lister's sounds. If there be impassable stricture, with retention, a serious operation may often be averted by performing suprapubic aspiration with a fine needle once or twice, when probably within twenty-four hours dilatation will be possible. Each patient is taught to pass a bougie for himself, and on leaving the hospital they are given a No. 9 soft bougie, *à boule*, which they are ordered to use at least once a week. The author wishes to show how this treatment may save many from internal urethrotomy, and if they will only use the bougie after they leave the hospital the cure is complete.

1566. *Peyton on a Case of Cerebral Cyst: Recovery.*—In the *Jour. of the American Med. Association*, January 1889, p. 88, Dr. Peyton records the following case. J. P., aged 22, received a blow on the left side of the head in 1880, which produced a punctured fracture of the parietal bone. The depressed bone was elevated at once, and after a week the patient seemed nearly well, the mind clear, with every other sign of perfect recovery. Three years afterwards he was seized with convulsions, and these occurred at varying intervals during the following twelve months. In October 1884 he was first seen by Dr. Peyton, who detected a depression one inch posterior to the coronal suture, and the same distance from the mesial line in the temporal bone on the left side. Trephining was at once done; the button removed was three-fourths of an inch in diameter, and from the centre of this there projected a sharp spicula, one-fourth of an inch in length from the inner table. The wound healed in a few days, and for six weeks there was no return of convulsions; then they returned regularly up to February 1888, when another operation was decided upon. A second button was removed by trephining, and an incision was made through the dura and pia mater, when there was revealed a cyst as large as a guinea-fowl's egg. By hooking the cyst with a tenaculum and making an incision into it, half an ounce of clear fluid escaped, tinged with blood towards the end. Drainage-tubes were inserted, and the wound kept clean by pure water only. The case did well until the third day, when the temperature rose to 105° F.; the wound was at once opened and washed out, then closed again, and in six hours the temperature was down to 100° F. After this the patient made a good recovery and follows his ordinary vocation.

1567. *Blackwood on the Cure of a Large Abdominal Hernia.*—In the *Provincial Med. Jour.*, March 1889, p. 139, Dr. Blackwood reports a case of large abdominal hernia, with adhesion of the contents of the wall of the sac. A woman, aged 24, was admitted into hospital on June 15, 1888. About two years before she had abdominal section performed for double pyosalpinx. About twelve months after the operation she observed a 'small lump' at the lower end of the cicatrix in the abdominal wall. On admission it was noticed that a hernia was situated in the middle line of the abdomen between the umbilicus and pubes. The hernia was soft and pendulous and easily reduced, leaving an aperture readily recognised by the finger. The patient consented to an operation, which was performed in the following manner. An incision about three inches in length was made over the sac, and including part of the old cicatrix; the skin and subcutaneous tissues having been cut through, the underlying structures were successively divided on a director until the peritoneal sac was reached. The contents and sac having been returned into the abdominal cavity, it was found that the aperture was formed by the 'falling apart' of the recti muscles; the space was oval in shape, its vertical diameter being about two inches in length and its transverse diameter one inch. The inner edge and a portion of each muscle were then carefully freed from the neighbouring structures, and brought together by sutures of silkworm gut. Drainage of the cavity behind the recti muscles was obtained by inserting a rubber tube between the muscles at the lower extremity of the wound; the interior of the superficial cavity was dusted with iodoform and carefully packed with antiseptic gauze, the skin-wound not being sutured, the wound being dressed with antiseptic pads. Two days after the operation pus was discharged freely from the deeper cavity, and continued until the wound was quite healed; the more superficial cavity healed up gradually by granulation. The author remarks that this operation answered the purpose of removing the trouble without running any serious risk, whereas the operation of opening the sac and freeing the adhesions would have been very difficult and dangerous.

RICHARD NEALE, M.D.

1568. *Rubio on Resection of* 8 *Centimètres of the Ileum: Cure.*—D. G., woman, aged 32. History: on Jan. 4, 1888, seized with colicky pains, tumour in right groin, vomiting, constipation. Tumour became phlegmonous, opened spontaneously, pus and excrementitious matters escaping, by two openings, one over the external inguinal ring, and the other in the lower part of the right labium. On admission, Feb. 1, 1888, the patient was much wasted, very dirty, and neglected, fæces escaping by the fistulous openings. Until April 3 the openings were kept closed by collodion and pressure by bandages, and little or no fæces or discharge was visible. An inguinal abscess, accompanied by fever, then formed, and pus and abundant fæcal matter escaped. The same treatment was continued until June, eight days and more passing without any discharge appearing. In July the lower fistula reopens and the thermo-cautery is applied. Things go on much the same till Dec. 16 when laparotomy is performed. The third loop of the ileum, counting from the cæcum, is found adherent, and ulcerated for 3½ centimètres long by 2½ wide. Eight centimètres of the intestine and the corresponding part of the mesentery are removed. In a fortnight cicatrisation was complete, and the patient was allowed to get up. The abdominal incision chosen was the oblique lateral to the right, as recommended for tying the external iliac; this exposed directly the cæcum and vermiform appendix. The bowel was then followed to the third loop of the ileum, which was found adherent in the crural region. The large size of the ulcerated part necessitated the complete resection of the bowel transversely. The corresponding part of the mesentery was removed by a V-shaped incision and the vessels tied. The suture of the mesentery and of the bowel was made with a continuous thread of catgut. Two days after the operation, the bowels acted spontaneously, but the sutures stood the strain on them well, and the patient recovered without a bad symptom. The temperature never rose above 99° F. after the operation.

1569. *Ribera y Sans on Intrathoracic Hydatid Cyst: Exploratory Laparotomy.*—Dr. J. Ribera y Sans, professor of clinical surgery in the University of Madrid, reports the following interesting case to the *Rev. de Med. y Cirurg. Prácticas*, Feb. 7, 1889. A girl, 10, was admitted to the Hospital for Children on April 30, 1888. Hydatid cyst of the liver being diagnosed by Dr. Gonzalez, she was transferred to the surgical side for operation. Her general health was good, digestion perfect, lung-sounds normal, perfect symmetry of both sides of the thorax. Enormous swelling of abdomen, especially above the umbilicus; skin much stretched, with conspicuous network of superficial veins. Fluctuation in lower part of abdomen. A solid tumour, everywhere dull on percussion, occupied the upper part of the abdomen, descending on the right side almost to the iliac fossa, on the left extending to the left hypochondrium. No hydatid tremor to be made out. On May 17 an exploratory abdominal section was performed; the supposed neoplasm came into direct contact with the opening, and closing it so that the intestines did not protrude. The colour of the tumour was a slaty grey, and it resembled in appearance an enormously hypertrophied pancreas. On introducing the hand into the cavity of the abdomen the tumour was found to reach the right iliac fossa, extending to and occupying the whole of the right hypochondrium, supra-umbilical and left hypochondriac regions. Without adhesions in front and below, above and behind it was firmly attached to the abdominal walls, so that it was only possible to explore the anterior surface and lower border. No diagnosis was come to; the solid tumour, evidently in intimate relation with the liver, neither in colour nor appearance resembled that organ, and it was impossible to say whether it was the enormously hypertrophied liver or a neoplasm in intimate relation with it, or a cancer of the epiploon, or a neoplasm of the pancreas. Its removal being out of the question, the wound was closed, the abdomen being much diminished in size by the escape of ascitic fluid. The patient recovered well from the operation, and was just about to be discharged when she contracted diphtheria; recovering from this, she caught small-pox and died. [Apparently there are no means for the isolation of infectious cases.—*Rep.*] On *post mortem* the abdominal tumour was found to be the enormously hypertrophied liver firmly adherent above and behind. On the right side the diaphragm was depressed, forming a large projection into the abdominal cavity. On its thoracic side was adherent to it an enormous hydatid cyst, tense and full, measuring 24 centimètres long by 15 centimètres wide. This cyst, depressing the inferior wall of the thorax, pushed down the enlarged liver. The most notable point is that it so little modified the relations of the lung that during life no alteration could be detected. Its presence was shown by no physical signs, and the patient never had shortness of breath nor the least increased frequency of respiration.

G. D'ARCY ADAMS, M.D.

1570. *Wolff on the Treatment of Club-foot by Silicate Bandages.*—The author claims perfect success by his treatment (without any further operative proceeding than subcutaneous fascia or tendon division in cases of congenital club-foot) up to the (patient's) age of 19 years, in previous papers written by him. The present article contains the account of three equally successful cases of the worst kind of congenital club-foot in patients between 24 and 32 years old—*i.e.* after completion of the growth of the bony framework. One man, aged 19 years, had been cured for two years, and no so-called 'club-foot relapse' here occurred. This 'relapse' is only, in reality, a result of imperfect treatment; there is no such thing as a genuine relapse. The above individual only wore two silicate applications in all. Illustrations accompany the author's paper. This brilliant success justifies the author, he claims, in his theory that in the 'alterative force' ('Transformations-Kraft')—a force arising from alterations of the static relations of the foot, and changing the form and internal architecture of the foot accordingly—we have to do with a force of incalculable amount. In other words, this force can overcome all internal resistance; even the degree of consolidation and the age of the patient do not come into consideration. Three cases in young subjects are next given, each showing ideal results. Here the author does not operate, and concedes that repeated applications, and extreme care and patience are necessary for perfect success. The bandage must be applied by a practised hand. The author devoutly hopes that, in future, club-foot patients will no longer be treated by heavy mechanical appliances, or by mutilating operations on either the bony or the soft parts of the foot. E. J. Edwardes, M.D.

1571. *Nélaton on a Case of Aneurism of the Subclavian Artery Cured by Iodide of Potassium and the Constant Current.*—The patient, a man 35 years of age, came complaining of a pulsating tumour situated below the clavicle. There was a history of syphilis contracted when a youth. He was at once put on a low diet and was given from 15 to 30 grains of iodide of potassium in the twenty-four hours, and daily applications were made of the constant current (strength not given). An improvement rapidly manifested itself, and in two months the tumour had markedly diminished in size, and had ceased to pulsate. The author remarked that three cases of a similar kind had been recorded by M. Saboïa with equally successful results. It is not possible to say which of the agents employed is to be credited with the success which attended the treatment, and no data are available to explain any curative action on the part of the constant current.

1572. *Segoud on Impotence Consequent on Varicocele.*—The author reports on a case brought forward by M. Jamain in which the radical cure of a varicocele was followed by return of the sexual faculty in a man of 26 years of age, in whom it had been in abeyance since puberty. This 'frigidity' had resisted all methods of treatment, but ceased when the patient lay on his back. This position, or the use of a suspensory bandage, reducing the varicocele, caused an erection, which was readily brought about two months after resection of the scrotal veins. The author quotes various similar cases, particularly one by Vidal de Cassis in which the impotence and puerile voice peculiar to *castrata* disappeared after the operation.

1573. *Potherat on the Treatment of Hydatids of the Liver by Puncture and Injection of Sublimate Solution.*—The patient was a woman, 32 years of age, who was admitted on Oct. 27, 1888, into the Hôpital de la Charité with a tumour in the left side, which had been increasing in size for some years, but without causing anything beyond inconvenience. No jaundice nor other symptom of visceral derangement. On examination, the left hypochondrium and the adjacent part of the thorax were seen to be bulging as high as the sixth interspace. This enlargement was due to the presence of a smooth rounded tumour, about the size of a fœtal head, tense and elastic to the feel, but not fluctuating. The liver seemed, if anything, rather smaller than usual. The diagnosis was not easy to establish, but M. Trélat, the surgeon in charge, aspirated the tumour, and withdrew a litre of clear fluid. He then injected four ounces of a solution of perchloride of mercury (1 in 1,000), which was left in for ten minutes, and then evacuated with several ounces more of the fluid. The abdomen was then compressed, and a pad of wool fixed over the site of the tumour. The operation was performed on Nov. 21, and for some days afterwards the patient suffered from nausea and vomiting, with tympanites. The temperature went up to 100° F. On the 27th there was shivering and pain in the side. She then began to get better, and on Dec. 25 left the hospital at her request. When seen at the end of January 1889 the tumefaction had entirely disappeared, and only a small mass, deeply situated in the neighbourhood of the left lobe of the liver, could be detected. This method of treatment was first suggested by Bacelli in 1887, and has since been employed by Debove. Bacelli gives two cures out of four cases, Debove two cases, both successful, and Dujardin-Beaumetz one case, also successful. Bouilly relates three cases, two of which recovered and one suppurated, necessitating laparotomy; Terrillon two cases, both successful; and Trélat and Mesnard one successful case each. The successes must be discounted in view of the fact that simple puncture not uncommonly suffices to bring about a cure. In suppurating cysts, evacuation under antiseptic precautions is obviously the only proper course, and in ordinary cysts the efficacy of the treatment is doubtful in the presence of daughter cysts.

1574. *Verneuil on the Etiology of Tetanus.*—M. Verneuil, in a paper read before the French Academy of Medicine, dwelt upon the virulence of soil contaminated by the dejections of tetanic horses. He insisted on the frequency of tetanus in wounds of the lower extremities; thus, in Havana, out of 162 patients suffering from tetanus, 132 contracted it from wounds on the legs and feet. The disease is frequent in persons who, after being wounded, get in contact with the soil, as in cases of comminuted fracture, in which the bones are forced into the ground, and crushing of the bare feet; also when earth is used as a dressing, and when the wound is inflicted by an agricultural implement. Experiments made with ordinary soil and soil known to be contaminated strongly support this view. Certain soils seem to preserve their virulence much longer than others, and stagnant water appears to favour the proliferation of the microbe.

Alfred S. Gubb.

GENITO-URINARY SURGERY.

RECENT PAPERS.

1575. Tuffier, Dr.—On Hypertrophy and Compensatory Regeneration of the Kidney. (*Annales des Mal. Génito-Urinaires*, March.)

1576. Jacobson, W. H. A.—Four Cases of Nephro-Lithotomy. (*Brit. Med. Jour.*, March 30, 1888.)

1577. Steavenson and Butler-Smythe.—On Hydronephrosis caused by Renal Calculi. (*Brit. Med. Jour.*, March 30, 1889.)

1578. Lavaux, Dr.—On Washing out the Bladder without a Catheter by means of Simple Atmospheric Pressure in cases of Painful Cystitis.

1579. Le Grain, Dr. E.—Microbes of the Urethra: their Rôle in Blennorrhagia and its Complications. (*Annales des Maladies Génito-Urinaires*, March 1889.)

1580. Bazy, Dr.—On a Filiform Bougie with Metallic Core. (*Annales des Maladies Génito-Urinaires*, March 1889.)

1581. Maybury, Dr. A. C.—On a Case of Nephrolithiasis for which Nephrectomy was Performed. (*St. Louis Med. and Surg. Jour.*, March 1889.)

1582. **Browne, Buckston.** — On some Sources of Error in Sounding for Stone when the Prostate is enlarged, with a Description of a New Form of Sound.

1583. **Barker.**— On Cases illustrating Renal Surgery. (*Lancet*, March 2 and 9.)

1584. **Mayo Robson.**—On Prostatectomy.—A Sequel to the Operation of Suprapubic Lithotomy. (*British Med. Jour.*, March 9.)

Art. 1575. *Tuffier on Hypertrophy and Compensatory Regeneration of the Kidney.* — In a paper read before the Anatomical Society of Paris, Dr. Tuffier claims to have shown the method in which a kidney is hypertrophied after removal of its fellow. In a previous communication he showed that the power of compensatory hypertrophy in this organ in animals was almost indefinite, and that it was possible to remove by successive operations an amount of renal tissue equal to the weight of the two organs themselves. He considered that the amount of renal tissue essential to life might be estimated at about 1 gramme to every kilogramme of the entire weight. He expressed his opinion that there was a regeneration of the renal tissue, and it was to examine into the possibility and manner of formation of this compensatory formation that these observations were made. He considers that these prove it to begin with a vascular new formation, which soon developes into a glomerulus, which is then covered by a capsule of Bowman, formed at the expense of the neighbouring connective-tissue, and making communication with one of the convoluted tubes. On the eighth day after a nephrectomy on the dog it is found that in the opposite kidney the glomeruli are much larger, the capsule of Bowman thicker, as well as larger, the convoluted tubes more voluminous, their epithelial cells increased in size and number, but the character of the epithelium not otherwise altered, and the blood-vessels similarly enlarged. The new formations also appear in the following manner:—Along certain lines corresponding with enlarged vessels a great excess of glomeruli is found, and some appear to be in process of formation. New collections of capillary 'buttons' are seen, and these, the author considers, are coated with a new capsule, or penetrate the newly-formed glomerulus cavities, which are sometimes seen to be double or incomplete. This penetration of the vascular loops into the pre-existing cavities seems to be the method of entering into functional activity of the glomerule of compensation, and the tubes unite with others of the convoluted series.

1576. *Jacobson on Four Cases of Nephro-Lithotomy.*—Mr. W. H. A. Jacobson read this paper at the Clinical Society of London, March 22. Case I.—The calculus weighed 42 grains, consisted of oxalic and lithic acid, and was removed from the pelvis of the right kidney. The patient was aged 23, had had symptoms for five years, and recovered from the operation. Amongst the symptoms the patient had had frequent vomiting, worst when the pain was worst, which was probably due to the gradual stretching of the pelvis of the kidney by the stone forming in it. Besides the nausea and vomiting attending the agony of a descending calculus, Mr. Jacobson thought that attacks of sickness might be associated with a stone that had not yet commenced its descent, and that this might be an important diagnostic help in differentiating those occasionally difficult cases in which mere lithiasis closely simulated an actual stone. Was it a symptom of calculi forming in the kidney itself, or only in those situated within the slowly-yielding pelvis? Another point of interest was the entire absence of hæmaturia throughout the five years, although evidence of blood was diligently sought for. Trials of fast walking, running up and down stairs, twisting from side to side, were made in vain. It was this absence of hæmaturia, probably, which accounted for the patient being in three other hospitals, and twice before in Guy's, without exploration. Case II.—Huge renal calculus (473 grains) of lithic and oxalic acid, removed from the right kidney of a patient, aged 58; symptoms of thirty years' duration; death on the ninth day, with exhaustion; calculi probably present in the left kidney. This patient, a solicitor, of very sedentary habits, had all the symptoms of renal calculus. He complained of the severity of the pain in the right loin, testis, and thigh at night. The author said that Mr. H. Morris had attributed the night pain in cases of renal calculus to the passage of the contents of the colon over the kidney and the stone. This explanation would certainly have held good in this case, owing to his habitual flatulence, and the superficial position of the stone in his kidney. In other cases an over-acid and concentrated condition of the urine, leading to a deposit of minute crystals upon the calculus, might prove to be the explanation. Another point very worth attention was the confirmed degree of hepatic dyspepsia which often went with lithæmia, which arose from lifelong sedentary habits and rich living, and showed itself in frequent nausea, especially at the smell of food; a bitter, foul taste, great thirst; and, lastly, for many years, habitual constipation, and frequent attacks of what the patient called 'bellyache,' accompanied by, and largely caused by, flatulence. The urine had a specific gravity of 1018, no albumen or sugar, no pus. Oxalate of lime crystals were present in very large amount. About two pints were passed daily. The amount of urea excreted daily oscillated, but was rarely above 390 grains. During the day the water was held for three hours. The patient was disturbed about three times in the night. The right side, he insisted, was the cause of all the evil. Previous treatment having failed, the patient, having heard of nephro-lithotomy, was very anxious to have the operation peformed. Mr. Jacobson advised his waiting a month, leaving off his sedentary habits, and living by fixed rule. Mr. Howse extended the time of waiting to three months. Three weeks' holiday and judicious living had the effect of removing very largely the gouty dyspepsia, but the weary aching in the right loin persisted, and interfered sadly with the needful walking and driving exercise. At one month's end the patient returned to town, determined to have the operation performed. On the morning of the operation he passed two small, fawn-coloured, lithic acid calculi, perhaps dislodged by a long railway journey. He repudiated utterly the possibility of these being the cause of his trouble. Probably these small stones came from the left, owing to the great difference between these and the large stones removed from the right kidney, and the utter improbability of any stones getting past this mass. On exposure of the kidney a large hard mass was felt in the position of the pelvis and the middle of the kidney itself. The stone, being exposed by scraping through the thinned overlying kidney-tissue with the finger-nail, was loosened in its bed with the closed blades of a lithotomy forceps, and then extracted with them. Very free venous bleeding followed on the disembedding of the stone, but quickly yielded to firmly applied sponge-pressure. The calculus weighed 473 grains, and is, therefore, one of the largest which have been removed. It occupied the pelvis and body of the kidney, the water-worn end lying towards the ureter, and the two processes fitting into calyces. The kidney seemed unaltered, save for thinning; there was certainly no other perceptible expansion, no cysts, and no pus. The patient rallied well from the operation, but for the first three days there was some evidence of embarrassed kidneys, and the urine throughout was loaded with oxalate of lime. His appetite at this time was satisfactory, and the patient was cheery. Day and night, however, his old dyspeptic flatulence tried him sorely, now that he had to keep recumbent. He was obstinately bent upon getting a daily action of the bowels, would insist upon having the bed-pan (in one twenty-four hours actually thirty times), and straining vehemently. On any day that his bowels did not act to his satisfaction he refused everything save barley water. Blue pill and seidlitz powders were found the most useful of the remedies tried. Thus day by day, while the patient held his own, there was no real gain of strength. The seventh day was a very restless one, with constant turbulent passage of flatus. On the eighth day, restlessness still persisting led to a marked failure of strength, with constant hallucinations. Gradually deepening coma, with twitchings of the limbs, followed, and death on the morning of the ninth day after the operation, caused probably by failure of the kidney. The presence of a large calculus of thirty years' duration in one, and probably a smaller one in the other kidney; the small amount of urine passed during the first three days, and again towards the close, all pointed to this. Whether the operation was justifiable in such a patient at 58 will no doubt be disputed by some. But most will allow that all other treatment would have been futile to relieve a life of which all the enjoyment and most of the usefulness had gone. The patient urged these points most strongly when made fully aware of the risks that he ran.—Case III.: Multiple Calculi ('gravel-pit condition') in both kidneys, with symptoms only on left side; patient aged 15; symptoms eight years; 46 calculi removed from left side, weighing 278 grains; death from shock; right kidney full of latent stones. In February 1888 Mr. Jacobson was asked by Dr. Goodhart to see this case, with a view to exploration. For the last eight years the lad had had pain in the left region of a stabbing character, increased by movement. The urine was alkaline, turbid, with white, ropy, mucoid deposit, pus cells and abundant triple phosphate crystals, specific gravity 1008 to 1010. The lower end of the left kidney could be felt just below the ribs. When it was pressed upon with the finger-tips, a peculiar dull grating sensation was transmitted, and a good deal of pain caused. The urine became acid under treatment. On exploring the kidney by the usual incision, as soon as the lumbar fascia was slit up, an irregular hard mass was felt, clearly occupying the whole of the kidney. The thin kidney-tissue was incised, and the opening enlarged by further lacerating it with the finger. The interior could only be compared to a gravel-pit; hosts of calculi occupied the dilated calyces. Those in the lower half were easily turned out, but an upper nest, lying as it did high up under the ribs, presented much difficulty. The kidney being drawn down and partly out of the wound, the first opening was plugged with a sponge, and a second one made with the finger into the upper end of the kidney, so as to reach the calculi here more directly. The chief difficulty, in addition to the large number of stones, was the mobility of the kidney, though it was well pushed up from the front. Every care was taken to keep the openings in the kidney plugged, but a good deal of blood was lost in the extraction of forty-six calculi. Ether was given throughout. The question of nephrectomy arose, and was decided against by Dr. Goodhart, as the percentage of urea had never exceeded 1·2. The sequel proved his wisdom. During the removal of the calculi the pulse began to fail; and, as the patient had been under ether for forty-seven minutes, Mr. Jacobson plugged the wounds in the kidney with strips of sal alembroth gauze, and inserted a large drainage-tube, closing only the extremities of the wound. The condition of the patient when returned to bed was one of marked collapse. Two hours later some improvement set it, but soon faded, and he sank four hours after operation. *Post mortem Examination:* There was no hæmorrhage; no injury to the peritoneum; but the right kidney, of which complaint had never been made, contained many stones. Case IV.—Large oxalate calculus (78 grains) removed from the pelvis of the right kidney in a patient aged 41; life-long symptoms; rapid and complete recovery. This patient had all the symptoms of renal calculus. At the operation, a large craggy calculus was felt in the pelvis. As the kidney was movable, Mr. Jacobson drew the lower end out of the wound, and brought the pelvis into sight. It was well that this was done, as two large veins crossed the pelvis just over the stone. The pelvis was nipped into between these vessels with blunt-pointed scissors, and the stone turned out with a blunt director. It somewhat resembled black coral, and weighed 78 grains. The way in which the foliaceous processes were intersected with numerous channels probably accounted for the escape of urine and the absence of any expansion of the organ. The recovery was rapid and complete. Mr. Jacobson asked for information, and suggested discussion on the following points:—1. The value of vomiting as a symptom of a calculus forming in the kidney or its pelvis, as well as a manifestation of a descending stone. 2. The nocturnal increase of the pains of a renal calculus observed in certain cases. 3. The probable effect of the passage of oxalates and lithates, habitual and prolonged for many years (as in the second case), upon the minute structure of the kidney. Should this be a factor to be taken into consideration before nephrolithotomy in a similar patient? 4. Would it have been wiser in a case like the third, where calculi were certainly present on one side and the amount of the urea was persistently low, to clear up the condition of the opposite kidney by puncture, or exploration of the liver or abdomen? 5. The absence of hæmaturia in certain cases of calculi forming in the renal pelvis, where the stone had a rough exterior, and was not protected by mucus. 6. The possible value of a preliminary nephrorraphy when a prolonged nephrolithotomy had to be performed in a very mobile kidney. 7. Was it safe, as recently suggested, to suture the wound in the pelvis after removal of a calculus from a healthy renal pelvis?

1577. *Hydronephrosis caused by Renal Calculi: Nephrolithotomy: Ulceration into a Branch of the Right Renal Artery, with Fatal Hæmorrhage on the Seventh Day after Operation: Necropsy.*—Dr. Steavenson and Mr. Butler-Smythe contributed this paper at the same meeting. P. B., a young woman, was admitted into the Grosvenor Hospital suffering from pain in her right side and down her right thigh. According to her own statement she had been treated as an in-patient for sciatica and hip-disease at several hospitals. At the time of her admission into the Grosvenor there was no sign of a tumour, but later on a swelling was discovered in the right iliac region. This swelling was twice aspirated, and urinous-smelling fluid was withdrawn. Later on, nephrolithotomy was performed, and a fair-sized calculus extracted, together with several grain stones. The patient rallied well after the operation, and, with the exception of a very variable temperature, all went well up to the end of the week, when she suddenly passed blood per urethram, the blood coming with a gush, but without any pain whatever. The bleeding was apparently controlled by treatment, but next morning it recurred, and the patient died. The *post mortem* examination revealed the right kidney distended to the size of a small football, and filled with blood-clot. The ureter and bladder were also filled with clot. The left kidney was healthy. When seen after the second attack of hæmorrhage the patient was beyond all surgical relief. The case was reported as being an unusual one, and also to show some of the dangers following nephrolithotomy.

In the discussion which followed, Dr. Hale White observed that the pain in that case was only observed whenever the psoas muscle was called into action; this was a diagnostic point, the pain being no worse when the erector spinæ was moved. Mr. Barker thought that too much importance was attached to hæmaturia in the diagnosis of stone in the kidney. This symptom was often absent in such cases, and, when present, might be due to other causes. In reference to the question of the suture of the pelvis of the kidney, he said he would be very disinclined to attempt it. It would be difficult to properly carry out, and would materially prolong an already exhausting operation. Mr. Barwell said that when the kidney was full of stones, or there was hydronephrosis, nephrectomy was superior to nephrolithotomy, as the kidney would probably never recover itself to any useful extent. Moreover, stones might be left behind, and give rise to subsequent trouble. He insisted upon the desirability of removing hopelessly diseased kidneys, even although no stones might be present. He agreed that it was not desirable to attempt to suture the incision into the pelvis of the kidney. Mr. Bruce Clarke observed that in many cases in which stone was found after death no symptoms whatever were present during life. He said the pelvis of the kidney was not easy to get at, and, *a fortiori*, to suture. He himself always made an incision into the ureter just below the pelvis, and then passed a probe upwards into the latter, and so guided the incision. The class of cases now under consideration were just the most difficult, because they could never tell whether the stones were many or few. He mentioned a case which had come under his care about a year since, with a history of long-standing calculous disease, pointing to both kidneys being affected. He made a small incision into the abdomen and examined both organs, and finding that there were a number of stones in both he closed the wound and did nothing further. Mr. Black pointed out that one objection to suturing the incision into the pelvis was that the surgeon would thus effectually bar the way to the exit of any stone he might have overlooked. He thought that in Mr. Butler-Smythe's case the better operation would have been nephrectomy. Mr. Jacobson, in reply, said that in his two cases the nausea and the vomiting were well marked, coinciding with the pain in the first, and with the ingestion of food in the second. With regard to the absence of hæmaturia in his case, he observed that this might be explained by the rigidity of the tissues round the kidney, which might have protected it against injury. He regretted now that he had not opened the abdomen of the boy in order to explore the opposite kidney. Dr. Steavenson, in reply, said that there was no vomiting at all in his case, and the history of a possible attack of hæmaturia in the past was only elicited after he had arrived at the diagnosis of a renal calculus. The pain was only felt when she attempted to walk, and was absent when she was lying down. Mr. Butler-Smythe, in reply, said he did not think he would entertain the suggestion to remove the kidney, even if he had the case again.

1578. *Lavaux on Washing out the Bladder without a Catheter by means of Simple Atmospheric Pressure in cases of Painful Cystitis.*—In a small work recently published (Steinheil, Paris, 1888) Dr. Lavaux gives a description of the method adopted by him. The fluid used is allowed to pass into the urethra by its own weight upon the principle of the syphon, an India-rubber tube carrying it from a reservoir above to the orifice of the urethra, into which a perforated nozzle is passed. The reservoir is placed about three or four feet above the patient, who is lying down. The liquid first fills the urethra, and then passes easily into the bladder. As soon as the patient shows a desire to pass water, the nozzle is removed, and the stream is allowed to pass out naturally. The injection is repeated as often as the operator judges necessary, but usually four or five injections are required, though this depends upon the tolerance of the bladder. Solutions of cocaine and of boric acid were chiefly used. For washing out the urethra an elastic fine catheter, with the end bulbous and the openings allowing of a reversed current, was used, so as to obtain a constant irrigation by antiseptic solutions several times in the day. A number of cases of painful cystitis are detailed, and the conclusions arrived at that this simple method of washing out the bladder without the aid of a catheter has many advantages, and that in cases of painful cystitis the anæsthetic action of cocaine is a great assistance towards cure. Where there is much loss of substance in the urethra difficulties arise, but this mode of injection often helps the surgeon to discover the presence and the position of fistulæ. Greater success in thoroughly cleansing and rendering aseptic the bladder and the urethra can be obtained by this method than by any other process. Anæsthesia of the mucous membrane of the bladder can be produced in a few minutes by the injection of hydrochlorate of cocaine by this means, and then the use of aseptic injections will cure cases of cystitis rapidly, and neither morphia nor nitrate of silver nor any cutting operation is required.

1579. *Le Grain on Microbes of the Urethra: their Rôle in Blennorrhagia and its Complications.*—This is a long and carefully written paper on the subject, and well illustrated by photographs. Authorities are freely quoted, and a very long array follows of differently named microbes found in the urethra in healthy and morbid states. Dr. Le Grain, however, is not prejudiced in favour of their being diagnostic. Many of the simpler micrococci, diplococci, and bacilli he has experimentally passed by means of sterilised bougies into the healthy urethra without producing any morbid phenomena. But that some of the microbes are pathogenic he has no doubt; still, whether the micrococcus gonorrhœæ does not rather play the part of an accessory than the chief or sole factor of the disease is, he thinks, open to doubt. The large development of saprophytic bacteria in the chronic stages of gonorrhœa may rather be traced to the desquamation of epithelium then taking place. But if the connection of microbes with the chronic stages is doubtful, it is not so in the complications often attending gonorrhœa. Careful observations by Dr. Le Grain as well as by many German surgeons indicate that most of the complications of the disease are due to microbes, though not necessarily to the micrococcus gonorrhœæ alone, but we cannot say that his observations are conclusive. Practically he, however, urges that sublimate solutions are capable of destroying the organisms found in gonorrhœa, and which at first, perhaps, are only accessory to suppuration, may afterwards infect the organism.

1580. *Bazy on a Filiform Bougie with Metallic Core.*—The importance of having a means of bending and moulding the bougie has induced Dr. Bazy to search for some material which shall combine firmness with suppleness, and at the same time allow of the bougie being fine enough to pass through the narrowest strictures. For this purpose he has obtained the assistance of M. Vergue, the instrument maker, who supplied him with a metallic thread of complex structure which was coated with silk and gum elastic. The result was to Dr. Bazy's satisfaction. The end is made olive-shaped, and the stem can be bent to any shape. An advantage claimed for it is that the suppleness of the metallic core ensures that no injury will be done to the walls of the bladder or urethra. The instrument was used to test it in six cases, in each of which all other forms of bougie had failed to pass, and in each he was successful with his new instrument. We have long felt that an improvement was wanted in our flexible and other catheters, and it seems that we may have here a material useful not only for the construction of solid bougies, but to catheters themselves. Many years ago we had catheters made with flexible metal and a central bore, and with olivary ends, and on a definite principle of gradual enlargement (and this seems to us still wanting); but for fine or filiform bougies and catheters the advantage of some such material as Dr. Bazy has made use of is apparent. We hope to see it adapted to the purposes we have indicated.

1581. *Maybury on a Case of Nephrolithiasis for which Nephrectomy was Performed.*—A married woman, aged 36, presented herself with a large tumour in the right hypochondriac region about the size of a child's head, giving rise to great pain and attended with pyuria, and no indication of disease of the liver. On January 6, 1889, a transverse incision was made in the right loin, and as soon as the tumour was reached a trocar was introduced into the fluctuating mass, and about six ounces of greyish urine drawn off. Then the tumour, which proved to be the much-dilated and degenerated kidney, was incised, and two large calculi removed. Feeling that the organ was so much degenerated as to be useless, the whole of the organ was removed without opening the peritoneum. The pedicle, which was composed of the renal artery, veins, and ureter, was ligated *en masse*. The cavity was packed with sublimate gauze, and the wound sutured. The patient rallied well from the effects of the operation. On the third day after the operation she had symptoms of uræmia; but a hypodermic injection of one-twentieth of a grain of pilocarpine produced profound perspiration, and she rallied. But, two days later, coma appeared, and she gradually sank on the eighth day after the operation. At the *post mortem* examination it was found that the other kidney was somewhat degenerated, and contained two calculi, or rather that large branching calculi filled the pelvis and calices. The extent of the disease made this an unfavourable case; but it does not appear that the other kidney was examined, and the advisability of complete removal seems to us open to question. Moreover, the ligature of the pedicle *en masse* is opposed to the practice of many authorities in this branch of surgery.

1582. *Browne on some Sources of Error in Sounding for Stone when the Prostate is enlarged, with a Description of a New Form of Sound.*—Mr. Buckston Browne read a paper on this subject at the Harveian Society of London, Feb. 28, 1889. His first proposition was that in cases where the prostate was enlarged, stones were often missed because the sound was arrested in the prostatic urethra. He illustrated this by several examples, and expressed an opinion that in many cases where 'the bladder was found contracted and the sound could not be turned,' the real truth was that the sound had never entered the bladder. Next, he proved that many stones were missed because the post-prostatic pouch was not explored. It was shown that in certain cases it was very difficult to explore this pouch by means of instruments passed in by the urethra, and that in certain other cases it was impossible to do so, and that in these rare cases the only way to search thoroughly was by means of suprapubic incision into the bladder. Several cases from the author's personal experience were cited in illustration. The sound used by the author was of solid burnished steel, with a round, smooth handle, a shaft 10 inches long and equal to No. 7 of the English scale, ending in a smooth, broad, flat beak, exactly like the end of a broad, flat-bladed lithotrite. Mr. Browne asserted that the beak of this instrument allowed it to ride easily over the bar at the neck of the bladder, and that it was not caught in one or other prostatic sinus as the end of the ordinary sound was so prone to do, and that when in the bladder it slipped more easily than an ordinary sound under a projecting prostatic middle lobe, and so enabled the surgeon thoroughly to search that favourite *habitat* of a stone—the post-prostatic pouch.

1583. *Barker on Cases illustrating Renal Surgery.*—Mr. Barker acts upon a wise principle in adding to his record of completed cases of renal surgery, and there is no doubt we shall come to a juster conclusion about some of the operations now in favour if we can see the entire personal experience of some of those who are operating extensively in this domain. What is wanted is a record of all results favourable and unfavourable. Case 1 is of intermittent hydronephrosis, due to renal calculus, and for this nephrolithotomy was performed and relief obtained. Case 2 was one of gonorrhœal pyelitis, for which tapping by the aspirator was twice done, and then nephrotomy, which was followed by steady and uninterrupted recovery. Case 3 was one of perinephral abscess, for which nephrotomy was performed. The primary disease was probably in the kidney itself and of tubercular origin. The beneficial result of the operation was most marked. Case 4, abscess of the kidney simulating calculus in its symptoms. Nephrotomy was performed, a drainage-tube left in for a time, and complete recovery followed. Case 5 was one of renal calculus, and nephrolithotomy was performed, six stones being removed weighing 430 grains, torsion forceps left on some bleeding vessels in the pedicle of the kidney, and this seemed to produce dragging pains and considerable shock until the removal of the forceps. This case also recovered. In only one of the five cases did any renal fistula remain.

1584. *Mayo Robson on Prostatectomy.*—There are many cases of calculus in the older subjects in whom the symptoms of enlarged prostate are pronounced, and it is in these that Mr. Mayo Robson advocates the removal of any projecting mass or bridle at the time of performing the suprapubic operation for the removal of the stone. Two cases are detailed. In Case I., a man of sixty-seven, no enlargement of the prostate was to be felt *per rectum*; but after removal of the stone the finger could feel a nipple-shaped enlargement of the middle lobe which blocked up the opening into the urethra. By means of scissors curved on the flat the projecting lobe was easily taken away, and comparatively little hæmorrhage occurred. An abdominal drainage-tube was left in for six days, and a fistulous opening remained which was closed by the application of the cautery six months later. But the urine passed by the urethra to some extent from the ninth day after the original operation, and ultimately entirely by it, and there was no obstruction to the passage of a catheter. In Case II., a man aged 63, there were symptoms of frequent micturition, with the passage of numerous small calculi, but there is no mention of whether the prostatic enlargement was distinguishable from the rectum. Here suprapubic cystotomy was performed, and about fifty calculi removed. The prostate was found to be enlarged in the shape of a thickened ring completely surrounding the internal orifice of the urethra, continuous below and on each side, but the finger could be passed through a natural slit in the margin above. The lower rim was divided by straight scissors. The index finger, assisted by forceps, was then passed into the lower slit, and enucleated two masses, the size of walnuts on either side, from the substance of the prostate. Here, too, very little bleeding occurred. The bladder was washed out with boracic lotion, a drainage-tube introduced, and the wound partially closed by two sutures. The tube was removed on the third day, and urine began to be passed by the natural channel during the second week. For about six weeks a suprapubic fistula remained, but this was closed by strapping, and by allowing the urine to pass through a catheter tied in the urethra for five days. Recently Mr. McGill described before the Clinical Society three forms of prostatic enlargement. First, the uniform projection surrounding the internal orifice of the urethra, as was here seen in Case II. Secondly, the senile enlargement of the middle lobe as seen in Case I.; and, thirdly, a pedunculated enlargement which may be only a modification of the second variety. The operation, as here recommended, is not a formidable one, and there is very little hæmorrhage, as a rule; and by means of the curved scissors and of the forceps with sharp edges it is comparatively easy to remove those projections which cannot be enucleated; but the enucleation of many of the adenoid masses is almost a matter of surprise for its easiness to the operator. Mr. Robson, therefore, urges that whenever it is suspected that the prostate is enlarged, and a calculus exists, the suprapubic operation should be performed, so that prostatectomy can be done at the same time, and the likelihood of troublesome incontinence, cystitis, and recurrence of stone may be diminished.

W. W. Wagstaffe.

MEDICINE.

RECENT PAPERS.

1585. Mays, Thos. J., M.D.—Pulmonary Consumption considered as a Neurosis. (Reprint from *Therap. Gaz.*, Nov. 15 and Dec. 15, 1888.)

1586. Williams, C. Theodore.—New Antiseptics in Phthisis. (*Practitioner*, February 1889.)

1587. Finlayson.—On Larvæ of a Dipterous Insect, passed alive from the Bowel of a Man. (*Glasgow Med. Jour.*, March 1889, p. 224.)

1588. The Treatment of Ascites by Faradisation. (*Illustrated Med. News*, March 1889, p. 201.)

1589. Collier.—On Symmetrical Gangrene. (*Med. Chronicle*, February 1889, p. 393.)

1590. Mahomed.—On Jumbul in Glycosuria. (*Practitioner*, December 1888, p. 417.)

1591. Trastour, Dr.—On the Cure of Chronic Articular Rheumatism. (*Rev. Gén. de Clin. et de Thérap.*, March 28, 1889.)

1592. Dauchez, Dr.—On the Incubation Period and Contagion of Mumps. (*Rev. Gén. de Clinique et de Thérap.*, March 14, 1889.)

1593. Dujardin-Beaumetz, Dr.—On Recent Advances in the Treatment of Diabetes. (*Bull. Gén. de Thérap.*, March 30, 1889.)

Art. 1585. *Mays on Pulmonary Consumption considered as a Neurosis.*—Dr. Thos. J. Mays, Professor of Diseases of the Chest in the Philadelphia Polyclinic, invites the consideration of pulmonary consumption in the light of a neurosis, and devotes two lectures to the treatment of the subject. In the first of these he lays stress upon the fact that many conditions outside the lungs themselves are concomitant, if not actually causative, of the development of phthisis. The relation of hysteria to the disease is exemplified by liberal quotations from the work of Professor Grasset, in *Brain*, but Dr. Mays does not agree with the author in attributing both the nervous and pulmonary affections to a deep-lying diathesis, but rather holds that the hysteria and the phthisis are both to be regarded as evidences of a diseased state of the nervous system. In support of this idea, he passes in review the various symptoms of phthisis, and shows that in every one a nervous origin may be traced. He explains the digestive disturbances as due to disorder of the vagus and sympathetic, and refers as authoritative to certain observations made by pathologists in 1827 and 1844. No mention is made of any observations upon the subject since the latter date! He points out that such symptoms as wasting and hæmoptysis, &c., may occur before any signs of disease can be discovered, and argues that nerve influence must be at work. He shows by many references to contemporary and long past works, that nervous degeneration, whether central or peripheral, may give rise to degeneration of tissue, and then passes to his conclusion that phthisis is to be attributed to long-standing chronic degeneration of the nervous supply of the lungs, to which eventually succeeds a catarrhal condition, similar to that induced by nerve degeneration in herpes zoster. From this 'all the pathological changes which are characteristic of phthisis follow as a necessary consequence.' Throughout these lectures no mention is made of tubercle as an element in the pathology of phthisis, nor does the bacillus tuberculosis appear to play even the humblest part in the disease as recognised and taught by Dr. Mays!

1586. *Williams on New Antiseptics in Phthisis.*—Dr. Theodore Williams, though not overlooking the fact that the main treatment of phthisis must be the general treatment of the patient, thinks that a fair trial should be given to any bacillicide drugs that may offer reasonable prospects of success, either by destroying the activity of the bacillus or by neutralising the effect of the ptomaine which he would assume to exist in the blood, and which has hitherto been described by the vague title of the 'tubercular virus.' The present paper deals with two such drugs only, phenyl-acetic acid and phenyl-propionic acid. These, when tried upon animals, have been shown to possess powerful anti-tubercular properties when used in sufficiently large quantities. Phenyl-propionic acid ($C_9H_{10}O_2$) is a derivative of coal-tar and consists of acicular crystals of a reddish-white colour, insoluble in water but soluble in spirit (1 in 6). A saturated alcoholic solution requires one ounce of water to every ten minims to keep it in suspension. The solution has a sour taste and a decided aroma. The dose employed was 10 to 20 minims three times a day, and the patients selected were many of them in a late stage of the disease. The acid was taken for varying periods with an average of forty-six days. It caused no nausea, vomiting, or anorexia, and the patients took no other medicine. In the large majority of cases, thirteen out of twenty, improvement took place. This was most marked in the increase of weight and improvement of strength and colour. No influence appeared to be exercised upon the temperature. The cases of early disease showed less improvement than the advanced cases. The local disease was only affected in a few cases. The results, so far as checking activity of tubercular disease is concerned, were not encouraging, the patients only benefited in general vigour. Phenyl-acetic acid ($C_8H_8O_2$) having much the same appearance and properties as the foregoing, but being more soluble in distilled water, was tried in a similar series of mixed cases of phthisis. The acid was given for a period averaging forty-five days. It did not give rise to any unpleasant symptoms, and although its odour could plainly be perceived in the wards, it was never detected in any of the patients' secretions. The results obtained were more satisfactory than those of the phenyl-propionic acid. General nutrition was improved, especially in the early cases, cough and expectoration were diminished, and local physical signs subsided. The relation of bacilli to the course of the cases, although closely examined, did not yield sufficiently trustworthy results. No result was produced upon the course of the fever. Dr. Williams concludes that the phenyl-propionic acid is more suited to the later cases, and the phenyl-acetic acid to the stage of tuberculisation. Further observations upon these points are wanted.

E. Clifford Beale, M.B.

1587. *Finlayson on Larvæ of a Dipterous Insect, passed alive from the Bowel of a Man.*—In the *Glasgow Med. Jour.*, March 1889, p. 224, Dr. Finlayson reports the case of a medical man, aged 30, living in the west of Scotland, who on July 13, 1887, took a large draught of mineral water on account of obstinate constipation. Very soon after, he passed a copious loose motion which was found to be swarming with the larvæ of a dipterous insect (Anthornyia canicularis or scalaris). For the next three days the bowels were moved repeatedly by means of croton-oil, mineral water, and enemata containing turpentine; all the motions contained the larvæ and had a peculiar smell. On July 20 the author was called to see the patient, as two days previously he had developed all the signs of pleurisy; by this time the motions had ceased to contain any larvæ. The patient recovered from the pleurisy and had no return of the larvæ in the stools. The question as to how these insects were introduced into the body had next to be solved. Dr. Meade, of Bradford, was consulted on the subject, and he believes that the ova are never swallowed at all, but are probably deposited at the anus while the patient's bowels are being moved at a privy. The patient habitually used a privy which had free communication with an adjoining midden. Dr. Meade states that the anthornyia canicularis and scalaris deposit their ova on rotten vegetables, and breed generally in privies, so that it is hard to understand how they can find entrance into the human stomach.

1588. *The Treatment of Ascites by Faradisation.* In the *Illustrated Med. News*, March 1889, p. 201, an article draws attention to the revival of the treatment of ascites by faradisation. Solfanelli lately employed this method with a patient who was affected with cirrhosis of the liver; one of the poles of the battery was placed in the lumbar region, and the other alternately on different points of the abdomen; the urine rapidly increased in quantity, and after four sittings, the ascites had almost disappeared. The exact method which has been employed differs considerably with the different operations; whilst one observer has applied one of the poles of the battery on the lumbar region, and the other on the abdomen, so as to induce contraction of the abdominal muscles, others have employed electrodes furnished with an interrupter, hoping by this means to produce more rapid contraction and expansion of the muscles on which they were acting. A great deal of the success is due to the intermittent pressure brought to bear upon the fluid by means of the muscular contraction of the diaphragm and abdominal walls, but this explanation is not accepted by all. Erb would rather attribute the accelerated absorption and diuresis to the action of the current on the nervous plexuses, by which means the absorbent vessels are brought into action, thus enabling the fluid to be carried off by the kidneys. This theory is based upon the experimental work of Ludwig and Schweigger-Seidel, in which they showed that a liquid placed on the diaphragm of a rabbit which has just been killed, could be made to pass into the lymphatics of the diaphragm by the actual contraction of that structure. Glück is rather in favour of the muscular theory, and has shown that faradisation of the abdominal muscles is quite capable of producing contraction of the diaphragm. How this process of elimination takes place is at present not really understood, but considerable benefit has been obtained in many cases, and further trial is decidedly warranted.

1589. *Collier on Symmetrical Gangrene.*—In the *Med. Chronicle*, February 1889, p. 393, Mr. Joseph Collier records a very typical case of that form of symmetrical gangrene to which Raynaud first gave the name. A single woman, aged 20, was admitted into the infirmary on Feb. 26, 1886. Her father died of heart-disease when 45 years old; otherwise her family history was good, and she had always enjoyed good health until a short time before admission. About the beginning of February she began to suffer with pain across the abdomen, and with slight feeling of sickness. This was followed by pain in the right arm, and the fingers of the right hand felt at times numb and cold; similar symptoms appeared in both legs, especially in the left, and were associated with a feeling of stiffness. The sickness increased, and for a few days she vomited three or four times a day. During the attacks of pain in the hands and feet she had noticed that the affected parts were pale, that the pain lasted longest in the left foot, and that as the pain increased, and took on a shooting character, the toes on that foot became of a blue character. When seen by the author she was lying cold and collapsed. The pupils were dilated, but readily reacted to light; the breathing was quiet and natural; there was severe abdominal pain, but no sickness, with slight abdominal tenderness at the epigastrium; no tumour could be felt. Lungs and heart were healthy; urine, specific gravity 1020, acid, no albumen, no sugar, no blood. She complained of stiffness in the left leg, and pain and numbness of all the fingers and toes; the three inner toes on the left foot were dry, black, and gangrenous over the whole of the ungual phalanx. Both feet were cold and pale as far as the ankle; the right hand was also cold, and a small blister formed near the end of the middle finger. Twenty minutes later she was free from pain, and the extremities were no longer cold and numb. On March 2 she had a severe paroxysm of pain and numbness lasting for half an hour. On March 6 she had another paroxysm, and after it the fourth toe on the left foot was found to be gangrenous. Opium was given in ½ gr. doses three times a day, and was increased when the pain was severe. On March 10 suppuration commenced along the line of demarcation, and gradually suppurated during the next five weeks, but the paroxysms continued at intervals, and she became more and more collapsed, until she died on May 13, 1886. On making a *post mortem* examination nothing remarkable was found in the chest, except that the heart was small, and weighed only 4 oz., but there was no disease of the valves. The small intestine presented at three distinct parts what was merely slight stenosis of its channel. There were numerous firm old adhesions uniting the coils of intestines together and the omentum. In the abdominal cavity there were about 8 ozs. of yellow creamy pus, especially lying about the region of the origin of the cœliac axis from the aorta. There was no evidence of diseased vessels, thrombosis, or embolism. The presence of peritonitis, especially well marked in the region of the solar plexus, makes the hypothesis probable that the irritation of the great abdominal sympathetic system was the cause of the arterial spasm which determined the paroxysmal symptoms in the extremities. There would be two factors present to produce the gangrene—first, the stimulation of the vaso-motor nerves in the sympathetic would produce the arterial tetanus, and, secondly, fibres acted upon at the same time would give rise to the condition of cardiac syncope, and so render the arterial spasm more effective in bringing about a bloodless condition of the extremities. This case adds another to the list of Raynaud's disease, where the earlier attacks were symmetrical, but the gangrenous stage only reached one side.

1590. *Mahomed on Jumbul in Glycosuria.*—In the *Practitioner*, December 1888, p. 417, Mr. Mahomed records the following case. A music teacher, aged 60, consulted the author in May 1888, on account of loss of consciousness, and inability to say what he wished to. He knew he was suffering from diabetes. His appetite was good, and he did not suffer much from thirst; his appearance was robust, but he had to work hard for his living, and he found himself at times unable to play or teach. On examining the urine it was found to be of specific gravity 1020, and to contain a considerable amount of sugar. Mr. Mahomed decided to try the effect of jumbul, and ordered him a two-grain *perle* (Christy) three times a day. At the end of a week the urine was free from sugar. The drug was then discontinued, and the sugar at once reappeared, only to disappear on resuming the jumbul again, and this cycle of events could be brought about with certainty as often as required. Though the patient gained much in self-control and steadiness during the treatment, he felt that while under the influence of the drug he experienced considerable temporary depression. He was therefore ordered to take two *perles* a day, and that only on alternate days. Four months after the commencement of this treatment the urine was still free from sugar. This patient suffered from cerebral excitement during the time he had glycosuria, and the effect of the jumbul was to cause nervous depression, whilst it caused the sugar to disappear. This action might possibly be due to a depressing action of the drug on the vaso-motor centres. RICHARD NEALE, M.D.

1591. *Trastour on the Cure of Chronic Articular Rheumatism.*—The author insists upon the necessity for movement, in spite of pain, in the treatment of this intractable complaint. It is essential that the treatment should be commenced before adhesions have been set up between the articular surfaces, although even then the case need not be abandoned as incurable. He orders his patients to exercise each of the affected joints for a certain length of time daily, and he claims to have carried out this treatment for many years in a large number of cases, with the most gratifying results. Even in arthritis deformans he has succeeded in arresting the further progress of the disease by movement combined with hydrotherapy and general constitutional treatment.

1592. *Dauchez on the Incubation Period and Contagion of Mumps.*—In an epidemic of mumps it was noticed that contagion took place, in three cases, after an interval of fifteen days, once seventeen days and once nineteen days, after apparent infection. Dr. Dauchez concludes that the incubation period is fifteen days on an average, that infection takes place between the first and third day of the fever, and that isolation, to be effective, must not be less than seven days. That where isolation is not practicable the best course is to prescribe antiseptic mouth-washes.

1593. *Dujardin-Beaumetz on Recent Advances in the Treatment of Diabetes.*—The most noteworthy innovation in the pharmaceutical treatment of diabetes is the administration of arsenicated lithia, which, though it may not have realised the sanguine anticipations of its introducer, Dr. Martineau, is nevertheless of service. The author gives eight grains of carbonate of lithium in a glass of Vichy water, to which two drops of Fowler's solution is added, to be taken before each meal. In diabetes of nervous origin, characterised by extreme polyuria, he gives 10-grain doses of antipyrine, sweetened with saccharin, three or four times daily. Its effect is to reduce the quantity of urine eliminated as well as the sugar, the latter not only *pari passu*, but absolutely. Phenacetine and exalgine bring about the same results. He advocates the use of saccharin for sweetening purposes, and states that provided the quantity ingested does not exceed two grains daily no inconvenience is likely to be caused. Passing on to the dietetic treatment, the author speaks very highly of 'soja' bread, the only drawbacks to the use of which are its disagreeable taste and laxative action on the bowels. With reference to the use of potatoes, he points out that they contain 17 per cent. of glucose as compared with the 19 and 20 per cent. of best gluten bread; hence, that potatoes are preferable to gluten bread. He stipulates, however, that the quantity ingested shall not exceed 100 grammes (7 ounces) daily, as otherwise it would do more harm than good. He remarks that milk augments considerably the proportion of sugar in the urine, and the same remark applies to fruits, and especially grapes. To make up for the loss of carbo-hydrates, fats and viands containing fat are to be commended—caviar, sauerkraut, &c. Alcohol must only be given with caution, and in limited quantities. ALFRED S. GUBB.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1594. NAGEL, DR. W.—Origin of Epithelial Tumours of the Ovary. (*Archiv für Gynäk.*, vol. xxxiii., Part 1, 1888.)

1595. GOTTSCHALK, DR. S.—A Case of Cavernous Degeneration of the Ovaries. (*Archiv für Gynäk.*, vol. xxxii., 1888.)

1596. BULIUS, DR. GUSTAV.—Origin of Unilocular Cysts of the Ovary. (*Zeitschrift für Geburts. u. Gyn.*, vol. xv., 1888.)

1597. BYFORD, DR. W. H.—Ovarian Pregnancy. (*Obstetric Gazette* (Cincinnati), February 1889, and *Amer. Jour. of Obstet.*, March 1889.)

1598. POMORSKY, DR.—Cancerous Degeneration of an Ovarian Dermoid Tumour. (*Centralbl. für Gynäk.*, 1889, No. 11.)

1599. DÜVELIUS, DR.—Arrest of Development of Uterus; Pelvic Pain; Oöphorectomy. (*Centralbl. für Gynäk.*, 1889, No. 9.)

1600. ROBINSON, DR. (of Constantinople).—On Antipyrine as a Hæmostatic. (*Rev. Gén. de Clinique et de Thérap.*, March 14, 1889.)

1601. IRVING, DR. K.—On a Case of Puerperal Eclampsia treated with Pilocarpine. (*Archives of Gynæcology*, January 1889.)

1602. SCLIFASSOWSKI, DR.—On a Case of Laparotomy for Pregnancy in the Right Cornu of the Uterus. (*Rev. Gén. de Clin. et de Thérap.*, March 28, 1889.)

1603. POLAILLON, M.—On a Case of Hysteropexia for Prolapse of the Uterus. (*Rev. Gén. de Clin. et de Thérap.*, Feb. 21, 1889.)

ART. 1594. *Nagel on the Origin of Epithelial Tumours of the Ovary.*—Dr. Nagel lays stress on the involutions of epithelium and the minute cysts which are seen on the surfaces of ovaries subject to chronic inflammation. They are the direct result of inflammatory processes. Fissures, and swellings on the surface which bulge and touch each other, are to be seen in these cases. The condition is in no way homologous to the well-known sinking of the primary follicles into the embryonic stroma. Development of primary follicles after birth has never been authenticated in man. The epithelial elements developed in chronic inflammation are derived from the germinal layer. They form peculiar reticulated groups; the cells are cubical, with conspicuous nuclei, and no primordial ova or follicles are found amongst them. Dr. Nagel believes that these epithelial bodies are the starting-point for all epithelial growths of the ovary, especially cystomata. Waldeyer has noted that in the great increase of connective tissue so frequent in chronic oöphoritis, epithelial masses are found to be cut off so as to form small groups. Hence it is easy to understand how cancer of the ovary may originate in these epithelial growths. Dr. Nagel holds that the above pathological changes prove the necessity of removing the entire ovary in cases of cystoma. Simple ovarian cysts, bearing no epithelium, appear to be derived from corpora lutea and not from dropsical follicles. [Dr. Nagel's researches certainly tend to explain the occasional appearance of true carcinoma of the ovary. The reporter has detected one case out of nearly a hundred solid tumours of the ovary which he has examined microscopically. Since multilocular cysts are, on the other hand, so common—if they have the same origin as ovarian cancer (as Dr. Nagel maintains), it is hard to see why the latter is so rare in comparison with cysts or even with sarcoma. Dr. Nagel's theory of so close a relation between cystoma and carcinoma does not agree with the well-known fact that true recurrence of a common multilocular cyst without glandular growths is practically unknown. The disease may develop in the opposite ovary, but it does not recur in the stump.—*Rep.*]

1595. *Gottschalk on Cavernous Degeneration of the Ovaries.*—The patient was 28, sterile, married ten years, and subject for nine to severe menorrhagia. Within three years the uterus was scraped out seventeen times without beneficial results; at length the hæmorrhage threatened the patient's life. Dr. Landau then removed the uterus, together with the appendages. The scrapings from the endometrium had not shown any pathological changes which could account for the hæmorrhage. On section, the ovaries were found to contain a number of very irregular and ill-defined spaces filled with dark blood. The surface of each ovary was smooth and purple, and the organ was quite double its normal size. On microscopic examination, the ovarian stroma was found to be cavernous throughout. Dr. Gottschalk discovered a proliferation of connective tissue, which he believed to be the primary condition, around the capillaries. The retractile power of this tissue had caused the capillaries to dilate and form blood-cavities of irregular size and outline (more probably the dilatation was due to the new tissue being too weak to support the capillaries). Through these cavernous changes the blood-supply of the ovaries was much increased, and the anastomoses between the ovarian and uterine arteries multiplied. This morbid increase of blood-supply also influenced the uterus, and caused, in Dr. Gottschalk's opinion, the hæmorrhages from the endometrium. The scrapings did no good, because the cause of disease lay, not in the uterus, but in the ovaries. Removal of the latter, not the uterus, would have been the more suitable course in this case.

1596. *Bulius on the Origin of Unilocular Cysts of the Ovary.*—Dr. Bulius examined five unilocular ovarian cysts, removed by Professor Hegar, of Freiburg. Two were undoubtedly multilocular adenoid cysts, where the septa had broken down. In one case the cyst was primarily unilocular and appeared to arise from a Graafian follicle. It bore no epithelium. Dr. Bulius does not believe in Dr. Nagel's theory that such cysts arise from corpora lutea. In the fourth and fifth cysts the inner wall was lined with epithelium, with tubular involutions. These involutions Dr. Bulius believed to be secondary. He traced this class of unilocular cyst to extreme development of a Graafian follicle. Nagel believed that the epithelium of a follicle is destroyed when the ovum escapes or perishes, hence no cyst with an epithelial lining can arise from a follicle. Bulius denies this assertion, finding that all cysts derived from follicles bear epithelium (this would doubtless be condemned as a *petitio principii* by those of the contrary opinion). When no epithelium is found, Dr. Bulius considers that it was probably detached during the emptying of the cyst or the preparation of the section. [For different opinions concerning the alleged alteration or destruction of the epithelial lining of any cyst by pressure of the fluid contents, see Fischel, 'Ueber Parovarialcysten und parovarielle Kystome,' *Archiv für Gynäkologie*, vol. xv.—*Rep.*]

1597. *Byford on a Case of Ovarian Pregnancy.*—At a meeting of the Gynæcological Society of Chicago, Dec. 21, 1888, Dr. H. T. Byford showed some specimens from the practice of Dr. W. H. Byford. Amongst them were the appendages from what appeared to be a case of ovarian pregnancy, in which the sac was intact and developed down between the layers of the broad ligament. The tube was entirely separate from the sac, and on the opposite side of the ovary. The fœtus was macerated, and, although it formed a beautiful specimen at the time (*sic*), had partly fallen to pieces. There was a small cyst in the other ovary, which Dr. H. T. Byford exhibited. [After this description, reproduced above almost word for word, a history is given; but that history evidently refers to a case of lacerated cervix, granular endometritis, and chronic disease of the appendages. Much is it to be desired that Dr. W. H. Byford may publish some clear diagrams of this important case. The description includes evidence, but not proof, of ovarian pregnancy, and proof of this disputed form of ectopic gestation is much needed. The reporter commented on this question in a note on another alleged case, described by Dr. Matthew Mann (London Medical Recorder, March 20, 1889, p. 107). Dr. H. T. Byford, it must be remembered, used the qualifying expression, 'it *appears* to be a case of ovarian pregnancy.'—*Rep.*]

1598. *Pomorsky on a Case of Cancerous Dermoid of the Ovary.*—This specimen was exhibited at a meeting of the Berlin Obstetrical and Gynæcological Society in February. It was removed in January from a patient, aged 49. The tumour was 'the size of a child's head' and consisted of a large cavity filled with hair, epithelial relics, and cholestearine crystals. The inner surface of the cavity was bare of epithelium and undergoing fatty changes. The outer wall was in most places even, but covered with inflammatory deposit, through adhesions; but inferiorly some irregular tuberosities projected from its surface. They were very firm and were found to represent the parenchyma of the ovary degenerated. These tuberosities bore soft, spongy growths, which had invaded the neighbouring intestine. They were found, according to Dr. Pomorsky, to be cancerous. [A good summary of the experience of different authorities on malignant changes in dermoid ovarian tumours is to be found in Olshausen's *Krankheiten der Ovarien*, 2nd edition, 1886. Two truths must be remembered in reference to this question. In the first place, we see in microscopic sections from dermoid tumours an infinite variety of epithelial and parenchymatous structures which may represent cancerous or sarcomatous degeneration, or may be perfectly innocent. In a case described in the reporter's *Tumours of the Ovary*, p. 89, the tumour contained soft, almost diffluent white growths, bearing the microscopic characters of round-celled sarcoma. The tumour was removed in October 1883, but the patient was free from any sign of recurrence at the end of 1888. In the second place, ruptured dermoids give rise to a metastatic diffusion which is clinically malignant, but quite distinct from the metastases of sarcoma and carcinoma. The precise nature of Dr. Pomorsky's case seems doubtful.—*Rep.*]

1599. *Düvelius on a Case of Oöphorectomy for Pelvic Pain due to Malformed Genitals.*—The patient was a robust girl, aged 19. She had never menstruated, but from the age of 15 had been subject every four weeks to headaches, which lasted several days. The interval between the headaches became shorter, the headache constant, and sacral pains further complicated the case. The vulva was found to be closed, the vagina absent; both ovaries could be felt; between them was, on each side, a lump, the size of a hazel-nut. The two lumps appeared unconnected. Dr. A. Martin believed that the nature of the symptoms, which were invaliding the patient, showed that they were due to the activity of the ovaries and the want of development of the rest of the genital tract. He therefore removed the ovaries. They were of normal size, as were the tubes. Each tube sprang from a tough body, representing a cornu of the rudimentary uterus. The peritoneum formed a fold between the rudimentary cornua, as is usual in such cases. The ovaries bore numerous cicatrices, and one fresh corpus luteum. The patient has remained free from pain since the operation (which was performed seven weeks before the case was reported).

Alban Doran.

1600. *Robinson on Antipyrine as a Hæmostatic.*—A woman, 55 years of age, the mother of several children, subject to profuse hæmorrhages, applied to the author on Feb. 1, 1889. For three days the hæmorrhage had persisted in spite of every treatment. On examination, the cervix was found to be enlarged, patulous, and ulcerated. He ordered infusion of digitalis and plugged the vagina, but without any relief to the flooding. He then tried hot-water irrigations and resumed the digitalis, but with only passing benefit. Subsequently he tried ergotine, both by the mouth and hypodermically. On Feb. 11 he again plugged the vagina, steeping the plugs of wool in a 5 per cent. solution of antipyrine. The following day the bleeding had given place to a colourless discharge, and the plugging was repeated with a 10 per cent. solution. On the twelfth all hæmorrhage had ceased, and in the course of a few days the general condition of the patient was all that could be desired.

1601. *Irving on a Case of Puerperal Eclampsia treated with Pilocarpine.*—M. C., primipara, æt. 21. Dr. Irving was called to attend her at term on November 15, she having been in good health up to that date. The child had been born an hour, and he found that the uterus was firmly contracted and the placenta in the vagina. While he was removing it the patient suddenly went into a convulsion, which, however, did not last long. He gave her hypodermically one-fourth grain of morphine, followed by forty grains of bromide of potassium. In twenty minutes another fit came on, when he repeated the treatment. Several more followed at short intervals, and on withdrawing the urine it was found to be highly albuminous. The fits continued to follow each other, and ultimately the patient was bled to the extent of some twenty ounces, without, however, checking the convulsions. As her condition was one of extreme gravity he resolved to try the effects of pilocarpine, and accordingly dissolved one of Wyeth's tabloids containing a third of a grain of the drug, and injected it into the arm just as another convulsion was coming on. In about eight minutes the skin began to get warmer, and the colour began to change; the skin became moist, a condition which soon gave place to a most copious flow of perspiration. The salivary secretion poured out of the nostrils as well as the mouth. She had two convulsions after the action of the drug began—the first much slighter than those preceding, and the last so slight that very little contortion of the face occurred and it soon passed off. From the time the medicine began to act the pulse and temperature began to fall. On the following morning she roused to partial consciousness, and was able to recognise the doctor. She dropped off into a quiet slumber and about nine woke up perfectly conscious, complaining of a curious feeling in her head as well as pain, and of a very sore tongue. She had no recollection of what had transpired on the previous morning or day. She recovered without any further puerperal trouble.

1602. *Sclifassowski on a Case of Laparotomy for Pregnancy in the Right Cornu of the Uterus.*—The patient, a peasant woman, 23 years of age, was admitted into the Moscow General Hospital, in April 1888, with an abdominal tumour the size of a child's head. Vaginal examination showed the uterus to be deviated to the left, and it was closely connected with the tumour. Married at 22, she had a stillborn child four days later. A year later she again became pregnant, and she had expected to be confined in June 1887. At term, labour did not set in, but she had some pain and a slight discharge of blood. On April 8 abdominal section was performed by an incision in the median line, and the tumour was extracted. It was oval in shape, with a smooth surface. On the right side was the ovary, of normal size, and on the left the Fallopian tube, a pedicle, a ligament, from 1½ to 2 inches long and three fingers' breadth in thickness, was attached to the middle of the tumour. This was securely ligatured, and the tumour removed. The patient made an excellent recovery, and left the hospital on May 7. The tumour weighed 5½ pounds, and on being laid open was found to contain a sticky mass of a dark grey colour and offensive odour, covering a fœtus which had undergone decomposition. The fœtus measured 36 centimètres in length, and was apparently between the seventh and eighth month of intra-uterine existence. The expulsion of the fœtus was probably prevented by the undeveloped condition of the right horn of this bifid uterus, which was cut off from all connection with the main cavity of the uterus. It is surmised that impregnation of the ovary on that side must have taken place through the peritoneal cavity (transmigratio seminis extra-utero).

1603. *Polaillon on a Case of Hysteropexia for Prolapse of the Uterus.*—M. Polaillon reports a case of prolapse of the uterus of long standing, in which he had performed hysteropexia, or abdominal fixation of the uterus. The patient was a woman, aged 50, eight years past the menopause, in whom prolapse caused violent lumbar pain and dysuria. The prolapse was complicated with cystocele. On opening the abdomen he experienced the greatest difficulty in bringing up the uterus, which was studded all over with small fibroids. He passed several sutures through it, and fixed it to the abdominal parietes. The operation was carried out with the strictest antiseptic precautions, but the day following the operation the patient complained of abdominal pain, and was sick. A week later she succumbed to peritonitis. At the autopsy no sign of union could be seen in the abdominal wound, and the sutures maintaining the uterus in apposition with the abdominal wall had given way. The peritoneum was the seat of a general inflammation. He attributes his want of success to the absorption of the catgut sutures, which he will discard in any future operation in favour of metal or silk. M. Terrier, however, has performed the operation five times with catgut sutures without their having given way.

Alfred S. Gubb.

OPHTHALMOLOGY.

RECENT PAPERS.

1604. Pique, Lucien.—The Pathology of Glaucoma. (*Archiv. d'Ophthal.*, January-February 1889.)

1605. Priestley Smith.—Pathology of Glaucoma. (*International Ophthalmological Congress*, Heidelberg, 1888.)

1606. Snellen.—On the Treatment of Glaucoma. (*International Ophthalmological Congress*, Heidelberg, 1888.)

1607. Schön, Leipzig.—On Cupping of the Disc due to Accommodation.

ART. 1604. *Lucien Pique on the Pathology of Glaucoma.*—This is a very lengthy contribution, consisting in great part of lengthy arguments against theories that have not met with general acceptance, and which have therefore little practical interest. We shall, therefore, confine ourselves chiefly to that part of his paper in which he sets forth his view that simple glaucoma is a disease differing in its essential nature from all other forms, in that it does not depend upon pressure, and therefore should not be considered as glaucoma, but as a variety of optic atrophy. It is admitted on all hands that in simple glaucoma there is often no perceptible increase of tension, even though the patient is examined at frequent intervals extending over a long period. The advocates of the pressure theory explain this by assuming either that the increased tension is intermittent, that it is constant but too slight to be appreciated by the tests at our command, or that it affects only the vitreous chamber. The first two assumptions are, the author considers, merely advanced to bolster up a preconceived theory, while the latter is a physical impossibility. The argument that simple glaucoma and the other varieties may pass into each other by no means proves their identity. If, asks the author, the failure of vision is due to pressure on the nerve elements, how is it that the macular fibres, and those distributed to the inner part of the retina, remain long unaffected? The author attempted to determine whether cupping of the disc could be produced experimentally. A rabbit six weeks old was curarised, and a needle connected with a manometer was introduced into the vitreous behind the equator. The pressure could thus be varied and recorded. Under a pressure of 57 cent. of mercury no cupping was ever visible either with the ophthalmoscope or after enucleation. Other experiments were made with the object of ascertaining approximately the degree of pressure that exists in a glaucomatous eye. As rupture of the zonula does not usually occur during iridectomy, experiments were made to ascertain what degree of pressure was necessary to cause this accident to occur when the iridectomy was performed. It was found always to occur when the pressure reached 15 cent. The author, therefore, concludes that this represents about the limit of pressure that occurs in glaucomatous eyes. Several other points of interest were elicited by the experiments. In a dog five months old the pupil dilated with a pressure of 13 cent., and contracted again when it was lowered to 4 cent., but, on raising it again, it required 16 cent. to reproduce dilatation. In a rabbit of six weeks the pressure was gradually raised to 6 cent.; the choroid gradually became blanched, allowing the sclerotic to become visible. Sudden diminution, even of extreme pressure, never caused hæmorrhage, and as this complication is said to be frequent after iridectomy, it must be due to pre-existing disease of the walls of the blood-vessels. The author draws the following conclusions: That glaucomatous eye is (previous to the attack) a diseased eye; the cupping of the disc is not the result of simple pressure; it can occur without pressure, and if the latter aids in its formation it is unable to produce it in an eye previously healthy. Simple glaucoma should be considered as a lesion of the optic disc, in which increased intra-ocular pressure plays only a subordinate part, instead of being the primary lesion. Moreover, the inefficiency of iridectomy proves that the disease is of a different nature to acute glaucoma. The theory, therefore, of the symptoms being caused by obstruction to the outflow of fluid is, the author thinks, inapplicable to this disease. Nor does he consider that the affection usually classed under the title 'chronic inflammatory glaucoma' should really be considered as glaucoma, but rather as an irido-choroiditis with a glaucomatous tendency, a distinction which, to many, will certainly fail to convey an impression of a difference. The acute form is the only one which the author considers should really be classed under the term 'glaucoma,' since in this alone is there always increased tension. The latter, he believes, is not primary and due to deficient excretion, but secondary to vascular changes. The dilatation of the veins and the arterial pulsation usually attributed to pressure, are, in the author's opinion, caused by obstruction to the circulation from atheromatous changes in the arteries, although, we presume, he would not deny that increased pressure is capable of causing venous and arterial pulsation. In experiments on animals he failed by pressure to cause arterial pulsation with venous dilatation; both the arteries and veins on the contrary diminished together *pari passu* with the increase of the pressure. The following, then, is the author's scheme of the pathology of glaucoma. Arterial atheroma at a given moment, owing to the influence of various causes, modifies the intra-ocular circulation. The capillaries are badly filled with blood, return by the veins becomes impossible, hence tortuosity of these, serous exudation and subretinal œdema, which increases the intra-ocular pressure and destroys the vision temporarily. We have curtailed this paper very much, the original occupying more than forty-two pages. We do not believe, however, that we have omitted any important argument advanced by the writer, and it is difficult to avoid the conclusion that he has established his views on very imperfect data, and has disregarded many facts which are opposed to them. To take his experiments on cupping alone, it is obvious that even the highest possible pressure continued for several hours is not comparable to the effect of pressure continued for weeks.

1605. *Priestley Smith on Pathology of Glaucoma.*—This paper, although not advancing much that is new, is a most valuable contribution, since it brings together, in a clear and succinct manner, the evidence before us, both pathological and experimental, which we already possess. The author defines the glaucoma-process as an 'excess of pressure within the eye plus the causes and consequences of that excess.' The cases of glaucoma in which there is no perceptible increase of tension are explained by the fact that the increase may be intermittent. Increased tension, then, being at the outset considered as the prime factor in the disease, the author proceeds to consider how the intra-ocular pressure is influenced—(*a*) by secretion, (*b*) by the condition of the outlet, (*c*) by the condition of the intra-ocular fluid itself. *Secretion.*—The evidence that the intra-ocular fluid is secreted by the ciliary portion of the uveal tract, and not by the choroid proper, is practically conclusive. *Excretion.*—As to this, there is much difference of opinion and conflicting evidence. All are agreed as to the fact first pointed out by Leber, that fluid escapes from the eye at the angle of the anterior chamber, being there taken up by veins or lymphatics. But

Stilling and others, partly from injections made under high pressures, and partly from the results of Gifford's and Leplat's experiments (fully described in the London Medical Record, 1887, pp. 10 and 157), believe that a considerable escape of fluid also takes place at the optic nerve, around the central vessels. The experiments referred to are admitted by Mr. Priestley Smith to be conclusive as to the fact, but he gives cogent reasons for believing that the portion that thus escapes forms a very insignificant proportion of the total quantity that leaves the eye. The evidence on which this view is based was given more fully in the lectures recently given by the author at the Royal College of Surgeons. The chief points are that when there is papillitis with great swelling, and presumably, therefore, obstruction to the lymph-channels, no increased tension occurs; secondly, that when obstruction occurs at the anterior outlet, in a previously healthy eye—*e.g.* traumatic cataract, or dislocation of the lens—increased tension does occur; thirdly, by the results of experiment. Those which depended upon the injection of substances whose presence could be subsequently detected, chemically or microscopically, have given such contradictory results that we omit them altogether. But the author's experiments with sheep's eyes under different pressures, and with very efficient precautions against error, give results which it is difficult to refute. These have already been published in detail (*Ophthalmic Review*, July 1888). It will be seen that the position of the lens and iris was displaced forwards or backwards, according as the injection was made into the aqueous or vitreous chambers, or as more was injected into one or the other. That the amount of fluid escaping from the eye also depended upon the same factor. It was greatest when the injection was made into the anterior chamber; a very slight excess of the vitreous pressure sufficed to check the escape from the eye. *Condition of the Fluid.*—Experimenting with a limpid, albuminous fluid, from a case of ascites, the writer found that filtration was much slower than with a normal salt solution. Increased intra-ocular pressure may, therefore, be caused by hypersecretion, obstruction to the outflow at the filtration angle, or by serosity of the fluids. It is evident that continued hypersecretion alone would tend to compensate itself by dilatation of the outlets and increased excretion, but the author's experiments show that a rapid increase in the fluid in the vitreous chamber pushes forward the lens-diaphragm and thus causes obstruction at the filtration angle. His experiments show that the escape of fluid from the anterior chamber is greater or less, according as the filtration angle is more or less widely open, and there is an abundance of pathological evidence in support of this conclusion. The specimens by which this was illustrated are most instructive. They are frozen sections of eyes excised for glaucoma, mounted by Mr. Priestley Smith's now well-known method. From a large number of these drawings have been taken; these are printed in the report of the Heidelberg meeting, and, with a few additions, were shown at the lectures at the College of Surgeons. These may be divided into three groups; (1) those in which there was closure of the filtration angle and glaucoma; (2) in which there was closure, without glaucoma; (3) those in which glaucoma was present without closure of the angle. The first group is by far the largest, and includes not only cases of primary glaucoma, but also cases in which the closure of the angle occurred from dislocation of the lens, the pressing forwards of the lens-diaphragm by a tumour behind it, or direct obstruction by a growth in the anterior chamber. When the angle is obstructed without glaucoma ensuing, it will be found either that there are abnormal channels of exit, or, more commonly, that the secreting power of the ciliary processes has become seriously impaired. Glaucoma occurring without obstruction is attributed to serosity of the fluid, and serous iritis, in which the depth of the anterior chamber is increased, is cited as an example. Among the causes that predispose to obstruction at the angle a prominent place is given to narrowing of the circumlental space by the increase in the size of the lens that takes place with advancing age, but the author's views on this and the evidence on which they are based are too well known to need repetition here. The author concludes as follows:—'The causes, then, of primary glaucoma are various, but they are alike in this that they lead to compression of the filtration angle. With that compression the glaucoma-process begins. The escape of fluid is retarded and the intra-ocular pressure rises; the increasing pressure hinders the flow of blood through the choroidal veins, and aggravates the swelling of the ciliary processes; this in its turn increases the compression of the filtration angle. Moreover, the blocking of the circumlental space checks the escape of surplus fluid from the vitreous, and the lens pressing forwards intensifies the mischief. Thus cause and effect react upon each other in a vicious circle. In acute glaucoma we see the vascular element at its maximum, in chronic glaucoma at its minimum, in the subacute and intermittent forms it seems to ebb and flow under various influences which aid or embarrass the circulation in the uveal tract. The vascular element finds its complement and auxiliary in the predisposing structural conditions of the eye.'

1606. *Snellen on the Treatment of Glaucoma.*—Since Von Graefe's discovery constant attempts have been made to explain the mode in which iridectomy influences glaucoma. The most important fact bearing upon this—the effect of mydriatics on glaucoma—we also owe to Von Graefe; while to Laqueur we owe the experimental proof that myotics have an opposite effect. Mydriatics, however, act injuriously and myotics beneficially only in certain varieties of the disease, and this fact affords a ground for dividing glaucoma into two classes:—(*a*) Posterior, in which there is over-distension of the vitreous chamber, so that the angle of the anterior chamber becomes closed. (*b*) Anterior, in which there is overfilling of the anterior chamber, as occurs in serous iritis. Here the filtration angle is opened out, but filtration may be retarded owing to inflammatory exudation being deposited on its inner surface. The beneficial action of myotics is limited to the former variety; by their action on the sphincter they draw the base of the iris away from the angle. Their use constitutes a valuable preparation to an operation, and they can for a long time keep in check the premonitory symptoms. The action of myotics is obviously a complicated one; they act partly by drawing back the base of the iris, but sometimes they have an injurious effect by causing abnormal relaxation of the zonula, and thus allowing the lens to be pushed forwards by the increased pressure in the vitreous.

They have also an influence on the intra-ocular circulation. The author found that if fluorescine was injected subcutaneously into a young rabbit, and atropine dropped into one eye and eserine into the other, the fluorescine appeared sooner in the eye with the eserine than in the other. In the inflammatory stage of anterior glaucoma myotics may do harm, for they raise the tension, increase the inflammation, and favour the formation of posterior synechiæ. While myotics have a curative effect only in typical glaucoma, sclerotomy is indicated in all. It acts partly as a paracentesis. Experiments with fluorescine seem to prove that it increases the circulation of the intra-ocular fluids. The author prefers a lance-knife for sclerotomy to a cataract knife, as he thinks it permits a more gradual escape of the aqueous, and that with it prolapse of the iris can always be prevented. Myotics are indispensable; not only do they render the iris tense but also the ciliary and choroidal muscular fibres, and by drawing the whole uveal tract together they favour the transudation of fluid into the anterior chamber. Myotics or sclerotomy alone have often only a temporary benefit, but the two together have a remarkable and more durable effect. The author thinks that the effect of the myotic in sclerotomy is partly due to contraction of the outer meridional fibres of the ciliary muscle which cause traction on the membrane of Descemet, and cause the inner edges of the sclerotomy wound to gape. If the iris prolapses, its excision is indicated, all attempts to replace and keep it in position being futile. Sometimes only a small quantity of fluid escapes; this is due to advance of the iris or lens, and iridectomy is indicated. In cases in which the author had in the same patient treated one eye by iridectomy and the other by myotics and sclerotomy, the latter was found to give the better result. Can we, the author asks, prevent glaucoma? While we know much of the predisposing circumstances, and of the pathological anatomy, especially in the latter stages, we had till recently not even an hypothesis as to the primary and remote causes of the increase of the intra-ocular pressure. To Schön belongs the credit of having been the first to look for this in a function of the eye. He points out the clinical fact that glaucoma usually comes on in cases in which the accommodation has been overstrained, as in hypermetropic, astigmatic, and presbyopic eyes which have been insufficiently corrected. According to Coccius, during accommodation the ciliary processes swell up and bend inwards. If at the same time the lens become more convex, opposite points of its margin come nearer together and the circumlental space is increased; but when, as in old eyes, the lens does not alter its shape, the effect of the accommodative effort is to narrow the space, while the relaxation of the zonula allows the lens to come forward.

1607. *Schön on Cupping of the Disc due to Accommodation.*—We give a brief abstract of this paper because it has been referred to in others. In support of many of the statements in it, the author advances very insufficient arguments—and this may in some measure be due to the fact that parts of the paper were omitted in reading it, and it is published as read. Some of the diagrams, also, that are referred to, do not appear to have been published. The author commences by criticising unfavourably the view that is commonly accepted—that increased intra-ocular tension is a necessary factor in glaucoma, and points out that adherence to this has led to the assumption that such increased intra-ocular pressure must have existed even in cases in which repeated careful examination has failed to detect it. The author has endeavoured to discover whether there may not be changes that take place in the disc, and which lead to its becoming cupped without there being any increased intra-ocular pressure. He has come to the conclusion that such changes do take place as the result of accommodative strain. The effect of this is first to cause cupping of the central part of the disc, the so-called physiological cup, which the author refuses to consider as physiological; and later to weaken the whole of the lamina cribrosa, so that it yields to the intra-ocular pressure. The author explains the effect of the accommodation thus:—The meridional fibres of the ciliary muscle, according to him, completely encircle the globe, reaching to the sheaths of the optic nerve. Contraction of these fibres tends to open the intervaginal space, and to stretch the lamina cribrosa, leading to rarefication of its tissue and impairment of its resisting power. This rarefication is said to affect the deeper layer first, and then the superficial. A great part of the paper is devoted to considering the manner in which the ciliary muscle acts on the lens, but it is impossible without rather elaborate diagrams to give an adequate exposition of the author's views. W. ADAMS FROST.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

RECENT PAPERS.

1608. BAKER, A. W. W.—Abscess of the Antrum. (*Journal of the British Dental Association*, Feb. 15, 1889.)

1609. SCHMIDT, MORITZ.—The Diagnosis and Treatment of Diseases of the Antrum of Highmore. (*Brit. Jour. of Dental Science*, March 1, 1889.)

1610. WINDLE.—A Personal Experience of Hay Fever. (*Birmingham Med. Press*, December 1888, p. 259.)

1611. CHAPPELL.—On Examination of the Throat and Nose of Two Thousand Children. (*American Journal of Med. Sciences*, February 1889, p. 148.)

1612. MACKENZIE.—On Neurosis of the Aural Apparatus. (*American Jour. of Med. Sciences*, February 1889, p. 157.)

1613. SEHRWALD.—On Plegaphony as a Substitute for Broncophony. (*Deutsche med. Zeitung*, No. 14, 1889.)

1614. HARTMANN, ARTHUR.—On Changes in the Tympanic Cavity in Cases of Perforation of Shrapnell's Membrane. (Reprint from *Deutsche med. Wochensch.*, 1888, No. 45.)

1615. HARTMANN, ARTHUR.—Recent Observations on the Formation of Cysts in the Auricle. (Reprint from the *Archives of Otology*, vol. xvii., No. 3, 1888.)

1616. TURNBULL, LAURENCE.—Deafness as the Result of the Poison of Syphilis. (*Philadelphia Med. Times*, Sept. 1, 1888.)

ART. 1608. *Baker on Abscess of the Antrum.*—Dr. A. W. W. Baker (*Journal of the British Dental Association*, Feb. 15, 1889) relates a case of this description with two sinuses leading into the mouth close to the right upper bicuspids. A free opening was secured by gouging away a portion of the alveolus and a small portion of the crown of a tooth was washed out, which had probably been retained in one of the pockets formed by septa across the floor of the antrum. The author prefers opening the antrum through the outer side of the jaw above the alveolus unless there happen to be some special indication for removal of a tooth and the perforation of its socket, or a pre-existing fistula elsewhere. He lays stress on the importance of having an opening sufficiently large to wash out the cavity thoroughly.

1609. *Schmidt on Diseases of the Antrum of Highmore.*—Dr. Moritz Schmidt (*Brit. Jour. of Dental Science*, March 1, 1889) diagnoses empyema of the antrum by making a small puncture below the inferior turbinated body with a fine cannula rather thicker and less pointed than a hypodermic needle, and curved like a Eustachian catheter. A pledget, soaked with 20 per cent. cocaine, is first inserted. He has diagnosed in this manner an empyema in sixteen cases, and once a collection of colloid fluid. In twelve cases the exploratory puncture was made with a negative result, but without causing any injury. If pus is found he recommends free drainage through an alveolus. A silver tube is to be kept in. E. Cresswell Baber, M.B.

1610. *Windle on a Personal Experience of Hay Fever.*—In the *Birmingham Med. Press*, Dec. 1888, p. 259, Dr. Bertram Windle details his personal experience in the treatment of hay fever. The author has suffered from this complaint for some eight or nine years and has tried almost every remedy recommended. Opium alone, or in combination with belladonna, afforded relief whilst under its influence, but after giving it three days' trial he concluded that it was better to submit to the disease, as the effects of the drugs incapacitated him from work. Quinine in 5-grain doses by the mouth gave slight relief, but used as a snuff or ointment it always aggravated the symptoms. Iodide of potassium, with perchloride of mercury, valerianate of zinc, and assafœtida in pills, gave no relief whatever. Chloroform as an inhalation formed for some time the author's sheet-anchor, and whenever an attack threatened he used to pour some chloroform on his handkerchief and inhale it freely. Iodine as an inhalation proved of some value, but not nearly so good as a strong bottle of salts, which was often most effectual. A good sniff would cut short a paroxysm at once, but the salts must be as powerful as can be made. Cubeb cigarettes were very comforting. The only real palliative the author knows of is cocaine. At first he found it gave very little relief, but this was because the ordinary preparations were used, and it was not until he tried 'Howard's cocaine' that any benefit was obtained, but there is a great drawback from using this drug. At first it acts with marvellous rapidity and seems to stimulate the whole nervous system, but after two or three weeks it produces great nerve depression and sleeplessness, with loss of appetite, and the strength of the drug has to be increased. The cocaine was used in the form of a 4 per cent. solution, about six drops of which was poured into the palm of the hand and sniffed up into the nostrils whenever the attacks came on, at the same time introducing a drop or two into the inner canthus of either eye. Dr. Windle states that, notwithstanding the benefit he obtained by using cocaine, the after effects were so disagreeable that he does not intend another year to use it. He hopes next year to find relief from bathing the eye several times a day with a weak solution of corrosive sublimate some time before the hay fever season commences, also at the same time painting the nostrils with glycerine of carbolic acid, with a view to deaden the surface of the nasal mucous membrane.

1611. *Chappell on Examination of the Throat and Nose of Two Thousand Children.*—In the *American Journal of Med. Sciences*, February 1889, p. 148, Dr. Chappell contributes the result of examining the throat and nose in two thousand children with a view to determine the frequency of certain abnormal conditions. In this number he found sixty cases of adenoid growths; two hundred and seventy with enlarged tonsils; three hundred and thirty with deviated septa; one hundred and fifty with spurs on septa; two hundred and sixty with hypertrophy of inferior turbinated bones; and one hundred and sixty with hypertrophy of middle turbinated bones. From these statistics the author found that enlarged tonsils and adenoid growths were the only anatomical abnormalities that could be classed as belonging to very early life; the other abnormal conditions being acquired usually after the age of six years, increasing rapidly with each succeeding year until puberty. All social classes are liable to them at about equal proportions, and at the same age. Males suffer more frequently than females. In glandular organs it is but a step from congestion to hyperplasia, and an increased afflux of blood being once established, a slight irritation will serve to keep it up, and hypertrophy is the necessary result. The increased number after six years of age seems to be due to several causes: 1. More children suffer after that age from scarlet fever, measles, diphtheria, whooping-cough, &c., and they are more exposed to blows and accidents, and to associate with other children. 2. Climate certainly has an important influence on the mucous membranes; persons coming from abroad to America soon complain of throat symptoms they never felt before. Prolonged nasal catarrh and irritation tend to produce other ailments, especially of the pulmonary, digestive, and nervous systems.

1612. *Mackenzie on Neurosis of the Aural Apparatus.*—In the *American Jour. of the Med. Sciences*, February 1889, p. 157, Dr. Mackenzie contributes a case of neurosis of the aural apparatus, closely allied to vaso-motor coryza—a sort of 'hay-fever' of the ear, so to speak. The patient was a lady, aged 42, who consulted the author on account of a peculiar periodic affection which attacked her every summer with unerring regularity. The affection came on suddenly in 1866 soon after her marriage, after a visit to the mountains of West Virginia, where the air becomes suddenly cool and damp after sunset. The disease commences, each year about June 1, without premonitory symptoms, with intolerable itching of the auditory canal, soon followed by swelling of the lining membrane along the whole length of the canal; this diffuse swelling rapidly increases until the meatus becomes completely occluded. The surface of the swollen membrane is intensely sensitive to all sorts of local applications or irritants, but seems relieved by the constant use of hot water. Later on, symptoms of middle-ear inflammation develop and give rise to deafness varying in degree, and the Eustachian tube becomes involved. The above symptoms last for a short while, when a profuse discharge takes place from the meatus, giving relief to her symptoms. The affection only makes its appearance during the hot season, and usually either in the month of June or September. It is always limited to one side, one ear being affected one summer, and the other the next; or the same ear may alone suffer for several consecutive summers; during the winter she never suffers from ear trouble, nor do her nose and throat show any signs of disease. The almost daily paroxysms of the disease generally last for exactly four weeks, when they suddenly disappear. Nothing she has ever taken has had the slightest effect, but last summer she spent at a well-known 'hay-fever resort,' and she was entirely free from her complaint for the first time in twenty-two years. RICHARD NEALE, M.D.

1613. *Sehrwald on Plegaphony as a Substitute for Broncophony.*—Dr. E. Sehrwald describes in the *Münchener med. Wochensch.* the following method he has adopted in diagnosing when there is failure of voice. He performs percussion of the larynx by means of a plessimeter and hammer (πληγή = stroke). The plessimeter is adjusted to one of the thyroid cartilages so that the long side of the instrument touches the median crista of the larynx. If the percussion is done with the finger or the hammer, the percussion sound is conveyed through the air of the bronchial space to the wall of the thorax, when it can be auscultated. The percussion can be done by the patient or any one else present, care being taken that it is not done too violently. Sehrwald notices the following results:—Over an infiltrated lung-tissue the sound is loud, clear and distinct, and tympanitic; felt also by the ear as a short stroke. In atelectasis of a larger portion of the lung there is a marked change of sound on opening and shutting the mouth, the sound being in the former case higher in tone and distinctly tympanitic. Healthy tissue containing air gives a dull and low, but, at the same time, clattering sound. Over exudations the sound is weakened; over large cavities it is louder and more tympanitic than over infiltrated tissue, and there is at the same time much variety of sound. Pneumothorax produces a sound with a metallic ring. The sound is always more intense on the side opposite to the larynx half that is percussed, and further when the mouth is closed and during deep inspiration. Sehrwald gives reasons for the results of his method, and it is to be expected that, in future, use will be made of his discovery in diagnosis during failure of the voice. JOHN ELLIOTT.

1614. *Hartmann on Changes in the Tympanic Cavity in Perforation of Shrapnell's Membrane.*—Of five temporal bones Dr. Arthur Hartmann (*Deutsche med. Wochensch.*, No. 45, 1888) found in three that the upper part of the tympanic cavity ('attic') was separated from the lower part by membranes which extended on a level with the neck of the hammer from the inner to the outer tympanic wall, both in front and behind. In the fourth case there were adhesions between the membrane and the incus and between the incus and the inner tympanic wall, by which the back part of the attic was shut off from the posterior inferior part of the tympanic cavity. In the fifth specimen, in which there was a cicatrix in Shrapnell's membrane, adhesions from the hammer and incus to the outer wall of the attic left a space which was filled up by a plug of exudation. The author concludes that the spaces described by Prussak, Politzer, and Kretschmann, which are surrounded by very delicate membranes, do not play an important part, but rather that where inspissated pus and epithelial masses are deposited or granulations are formed, membranous bands form in the neighbourhood, which attempt to cut off these masses (which act as foreign bodies) from the remainder of the tympanic cavity.

1615. *Hartmann on Cysts of the Auricle.*—Dr. Arthur Hartmann (reprint from the *Archives of Otology*, vol. xvii., No. 3, 1888) relates four cases (occurring in three patients), which confirm his previously expressed opinion that many affections of the auricle are frequently misnamed hæmatomata, the process not being due to effusion of blood. The three patients were well-nourished individuals of middle age (29, 35, and 38 years old), and, with the exception of the last case, had no tendency to mental disease. In none of the cases had injury preceded the appearance of the tumour. The tumours had existed on an average two weeks before incision; their contents always consisted of a perfectly clear, somewhat yellowish fluid; no reddish or blackish colour, no masses of detritus, and no shreds of fibrin were found in any case, which could have indicated a previous hæmorrhage. In all cases the cartilage was exposed at the bottom of the wound. In three, healing resulted in a few days; in one, it was delayed five weeks, owing to suppuration. In three of the cases inoculations of the fluid on to gelatine were made, but all the tubes remained sterile. The author does not consider it proper to call the disease hæmatoma or perichondritis, but thinks it most judicious to consider it a formation of cysts in the auricle.

1616. *Turnbull on Deafness from Syphilis.*—Dr. Laurence Turnbull (*Philadelphia Medical Times*, Sept. 1, 1888) states his opinion that syphilitic diseases of the ear are less numerous in the United States than in Great Britain or Europe. Whether this applies especially to congenital syphilis or not does not appear. From the observation of cases the author has no doubt in his own mind that there is a pathological reflex relation between the eye and the ear. In the treatment of deafness in congenital syphilis, he recommends hyd. cum cretâ, with a small quantity of opium for children, or even calomel well guarded, and the use of mercurial ointment; or, still better, the oleate of mercury by inunction, followed by syrup of the iodide of iron. What results he has had is not stated.

E. CRESSWELL BABER, M.B.

BACTERIOLOGY AND PARASITIC DISEASES.

RECENT PAPERS.

1617. NEUHAUSS, DR. R. (Berlin).—Upon the Flagellæ of the Bacilli of Asiatic Cholera. (*Centralbl. für Bakteriologie und Parasitenkunde*, Band v., No. 3, Jan. 12, 1889.)

1618. MAFFUCCI, PROF. ANGELO (Pisa).—On Experiments upon Tuberculous Infection of the Chick.

1619. ORLOFF, L. — Actinomycosis of the Brain. (*Vratsch*, 1888, Nos. 41, 42, 43, and 44.)

1620. JEKINOWITSCH. — Actinomycosis of the Lung, Diagnosed during Life from the Sputum. (*Vratsch.*, 1888, Nos. 8, 9, 10, 11, and 14.)

1621. KUSCHEW.—Actinomycosis of the Lung, Diagnosed during Life. (*Vratsch*, 1888, No. 19.)

1622. MÜLLER, E.—Infection with Actinomycosis by Means of a Splinter of Wood. (*Beiträge sur klinischen Chirurgie.* Herausgegeben von Paul Bruns, vol. iii., 1888, p. 355.)

ART. 1617. *Neuhauss upon the Flagella of the Bacilli of Asiatic Cholera.*—Arguing from the very active special movements which the cholera-bacilli exhibit when examined under the microscope the author concluded that they must possess flagella just as other motile micro-organisms. These flagella had not, however, been demonstrated in spite of the close attention which had been devoted to the investigation of the comma-bacilli by so many previous observers, until the author devoted much pains to demonstrate their existence. Before success was obtained various methods were tried. First of all, examination was made of the bacilli obtained from a few days' old bouillon-kultur, since under such conditions their rapid movement is especially well marked. Cover-glass preparations were examined (with Hartnack 1-18 inch homog. imm., and Zeiss apochromatic 1-40 aperture, 2mm Brw,) unstained but without success. Next, an endeavour was made to bring out the hypothetical flagella upon a photographic plate, but again with negative results. Again these organisms were examined in water to which a trace of perchloride of mercury had been added to stop their movements, but without result. A modification of Koch's plan of staining bacilli with hæmatoxylin and after with chromic acid to stain them black, was then tried, but again without good result. At last the following method was found to be successful. Bacilli were taken from a four-weeks' old broth culture which had been kept at a warm-room temperature. In this culture, instead of the very small ordinary comma-bacilli, long spirilla or unusually long and thick bacilli are found. They had for the most part lost their special mobility. Neither in cover-glass preparations stained black, nor in dry, unstained preparations, nor yet in unstained preparations examined in water could the flagella be detected with the eye. It was all the more surprising, therefore, that in a photographic negative of a preparation of this kind, attached to a short, stout, crooked bacillus, appeared a fine corkscrew-like flagellum; and, on alteration of the focus of the microscope on another plane, a second bacillus with a flagellum was similarly demonstrated. The author adds that a finer triumph for photography could not be thought of.

1618. *Maffucci on Experiments upon the Tuberculous Infection of the Chick.*—These experiments are interesting and important. They may be epitomised as follows. The culture of the tubercle bacillus used in the experiments was obtained through Professor Risolta from Professor Nocard. The culture was first grown upon blood-serum and afterwards mixed with sterilised broth. On June 28, 1888, a hen and a guinea-pig were inoculated as a control experiment, and at the same time eighteen eggs with the broth culture, which showed under the microscope, when a little was stained with Ehrlich's stain, copious tubercle bacilli. The guinea-pig died after twenty days with tubercle of the spleen and its hilus, in which numerous bacilli were found. The chicken died two and a half months after the inoculation with tubercle of the liver, which contained many bacilli. On July 17 eight chicks were hatched, having been placed under a brooding hen. The remainder of the eggs were either unimpregnated or spoiled, without trace of an embryo. One of the latter, however, contained a nearly developed chick, but neither tubercle nor bacilli were found in its liver. In the unimpregnated embryos the unchanged tubercle bacilli were found. Of the eight hatched chicks all were small and feeble, but lively, with the exception of one, which died thirty-six hours after its birth. The organs of the latter contained neither tubercle nor bacilli. The second chick died twenty days after hatching, and was very emaciated. With the naked eye no lesion could be detected, but in microscopic sections little tuberculous nodules without giant cells, well preserved and furnished with bacilli, were found. The third died on the thirty-second day, also much emaciated. Its liver showed tubercular nodules with bacilli more numerous and larger, but without giant cells. The fourth died on the fortieth day, presenting in the liver much the same, but larger tubercular knots, there being a few tubercle bacilli. The fifth died on the forty-third day. It was the most emaciated of the series, but yet presented no naked-eye lesion nor yet tubercle or bacilli in any organ. The sixth died forty-seven days after hatching, emaciated. No gross lesion, but numerous tubercles and bacilli in the liver, the former beginning to caseate; also tubercles, younger and smaller, in the lung. The seventh died seventy-eight days after hatching, emaciated. It presented both in the liver and in the lung yellowish tubercle, but more numerous, larger, and more caseous in the liver. The eighth died four-and-a-half months after hatching, emaciated and distinctly rickety, with tubercle of the inner organs, those in the liver larger and more caseous than elsewhere. All of the chicks were kept from the time of hatching, in a chamber the floor boards of which were washed with corrosive sublimate solution, and in which no tuberculous animal had ever been. Their food was wheat-corn. The author is of opinion that the infection of the embryo takes place through the area vasculosa, which absorbs the virus from the albumen, and that the liver is the first station on the way to the general infection, and that the lung follows after the liver; and that the infection does not occur through the amniotic fluid which the embryo absorbs, since no tuberculosis of the digestive organs has been discovered. A further series of experiments will be necessary to demonstrate the exact course of the tubercular infection and the time of its entrance into the embryonal tissues.

1619. *Orloff on Actinomycosis of the Brain.*—The patient suffered from multiple abscesses during life, associated with cramps, bilateral paresis, and paralysis. There was no sputum coughed up. At the autopsy an area of actinomycosis was found corresponding with the position of both central gyri, taking in their middle halves. It consisted of a single pus-excreting cavity. A similar actinomycotic area was found in the cerebellum, about the size of a walnut. Microscopic examination showed that both the cortex and the white matter were affected, but that the central grey nuclei had remained unaffected. Club-shaped actinomyces were found both in the cell-tissue as well as in the structureless material.

1620. *Jekinowitsch on Actinomycosis of the Lung, Diagnosed during Life from the Sputum.*—In this case of actinomycosis of the lung there were the symptoms of a chronic pleuro-pneumonia. The chief points of interest were the great pain and intense dyspnœa, which were altogether out of proportion to the physical signs by percussion and auscultation. There was no *post mortem.* In the sputum, which was lumpy and viscid, could be made out, by spreading it out upon a glass plate lying upon a sheet of black paper, a number of little yellow masses, which, when magnified, presented the characteristic appearance of actinomyces.

1621. *Kuschew on Actinomycosis of the Lung, Diagnosed during Life.*—The process of the disease in this case began at the apex of the lung, and extended backwards and downwards, producing pleurisy; the formation of a perinephritic abscess; and violent peritonitis, from which the patient sank. In the sputum, as well as in the pus from the pleura, the perinephritic abscess, and from the peritoneum, were found the characteristic little nodules of actinomyces in which the characteristic club-shaped corpuscles were found.

1622. *Müller on Infection with Actinomycosis by Means of a Splinter of Wood.*—A case of actinomycosis in a patient 28 years old. The infection was introduced by means of a splinter of wood from the floor. It was supposed that the splinter had been removed on the spot. The primary swelling of the hand which followed disappeared, but was afterwards followed by a second swelling of different consistence, which presented here and there fluctuation. On an incision being made, a cavity was opened, and in the soft granulation tissue which it contained, actinomycetes were found. A wood splinter 5 millimètres long and 1 millimètre broad was removed from the volar surface of the hand. It was itself covered with a soft, grey, fibrinous mass of actinomycetes. VINCENT D. HARRIS, M.D.

PATHOLOGY.

RECENT PAPERS.

1623. MACDONALD.—Hydatid Disease in New Zealand. (Reprinted from *New Zealand Medical Journal*, January 1889.)

1624. MIURA.—Zur Aetiologe der Kakke. (Virchow's *Archiv*, Band cxv., Heft 2, S. 355.)

1625. STEWART.—Progressive Facial Hemiatrophy. (*Montreal Med. Jour.*, vol. xvii., No. 7, p. 487.)

1626. BRADSHAW, T. R., M.D.—Pathology of Addison's Disease. (*Liverpool Med.-Chir. Jour.*, July 1888.)

1627. HUNT, J. M., M.B.—Some Affections of the Respiratory Passages. (*Liverpool Med.-Chir. Jour.*, January 1889, p. 58.)

1628. HANDFORD, DR. H.—Multiple Tubercular Strictures of the Intestine. (*Trans. Path. Soc.*, 1888.)

1629. HANDFORD, DR. H.—Dilatation of the Œsophagus. (*Trans. Path. Soc.*, 1888.)

1630. CROOKE, DR. G. F.—Pulmonary Endarteritis. (*Trans. Path. Soc.*, 1888.)

1631. SUTTON, J. BLAND, F.R.C.S.—On Some Congenital Pharyngeal Tumours. (*Trans. Odonto. Soc. Great Britain*, 1888.)

1632. HESS, DR. CARL.—Zur Pathogenese des Mikrophthalmus. (Von Graefe's *Archiv*, xxxiv., 3. 147.)

1633. NUNN, T. W., F.R.C.S.—On Certain Disregarded Defects of Development Chiefly in Relation to the Curves of the Spine.

1634. WILLIAMS.—On a Rare Case of Morbus Cœruleus. (*Bristol Med.-Chir. Jour.*, September 1888.)

1635. XUMETRA Y CODINA.—Hydatids of the Lung. (*El Siglo Medico*, March 1888.)

1636. SUTTON, J. BLAND.—Report on Dr. Bantock's Specimens of Ovarian Dermoids. (*Brit. Gyn. Jour.*, August 1888.)

1637. VIGNERON.—Hydatid Cyst in the Obliquus Externus. (*Bulletins de la Soc. Anat. de Paris*, lxiii^{e} année, 5me Série, Tome II.)

1638. JONES, JOSEPH, M.D.—Abstracts of Contributions to Teratology. Cases of John H. Allen and Miss E. Laundry. (*Jour. of American Medical Association*, Oct. 20, 1888.)

1639. MUNDÉ, DR. PAUL F.—A Rare Case of Adenomyxo-sarcoma of the Cervix Uteri. (*American Jour. of Obstetrics*, February 1889.)

1640. TURNER.—On a Case of Multiple Growth in the Myocardium. (*Illustrated Med. News*, November 1888, p. 145.)

1641. GRANT.—On a Case of Traumatic Aortic Aneurism following Railway Accident. (*Australian Med. Jour.*, September 1888, p. 393.)

ART. 1623. *Macdonald on Hydatid Disease in New Zealand.*—This paper is founded on the information obtained in reply to a circular sent by the author to the medical men of New Zealand. The disease appears to be more common in the south than in the north island, about 1 in 7,000 being affected in the former and 1 in 20,000 in the latter. Seventy per cent. of all the cases occurred in the liver. The various causes with those of special local importance are discussed.

1624. *Miura on the Etiology of Kakke.*—The author has come to the conclusion that the cause of this disease lies in the eating of certain fish of the family of Scomberidæ, for the following reasons:—1. The disease commences quite regularly about March, and disappears suddenly about September, this being the time during which certain forms of scomberidæ are to be had. 2. The men of the Imperial Japanese Navy and prisoners who get hardly any scomberidæ never suffer from kakke. 3. Soldiers, students, scholars in large schools, workers in large institutions, are all people who eat scomberidæ, and who are affected with kakke more than others. 4. The author knows several families who are fond of scomberidæ, and who suffer from endemic kakke. 5. There are several large States in Japan which lie on the sea, and yet escape nearly or entirely from kakke. Thus Okajama lies on the Inland sea; kakke is very rare, and naturalists point out that scomberidæ are seldom met with there. 6. In Tokio, Osaka, &c., kakke is very common; and in these places scomberidæ are numerous, cheap, and much eaten. 7. The following are the species producing kakke, the three first being the most important:—Pelamys orientalis, Schlegel; Thynnus albacora, Löwe; Scomber saba, Bleek; Caranx hippos, Linn.; Cybium niphonium, Cuv. et Val.; Seriola quinqueradiata, Schlegel.

1625. *Stewart on Progressive Facial Hemiatrophy.* The patient is a boy, aged 14, and the atrophy was first noticed two years ago, on the left side of the face. Eighteen months before this he was severely frost-bitten in the left cheek and ear. The atrophy affects those portions of the face innervated by the two lower divisions of the fifth nerve. The skin, subcutaneous tissue, muscles, and bones are all atrophied, the muscles least of all. The lower jaw is thinner and shorter, and the upper distinctly atrophied on the left side. The teeth are well developed. Owing to atrophy of the turbinated bones on the left side, the left nostril is wider than the right. There is distinct atrophy of the left half of the tongue, more marked anteriorly. There is no affection of any of the special senses, nor any disturbance of deep or superficial sensation, nor is there any difference in temperature between the two sides. The author notes that Mendel (*Neurol. Centralbl.*, July 15, 1888) has reported the results of a very thorough examination he made of the fifth nerve in a case of facial hemiatrophy, of many years' standing, in a woman. This patient had also atrophy in the region innervated by the left musculo-spiral nerve. She died from phthisis. Her case was first described by Romberg, and more recently by Virchow. The symptoms were those of a typical left facial hemiatrophy. Mendel found all the branches of the left fifth from their origin to their termination the seat of a proliferating interstitial neuritis. A marked and similar difference was found in the size of the right and left descending roots of the fifth, and also in the substantia ferruginea, the alleged nucleus of the so-called trophic root of the fifth. The examination proves that at least in certain cases of facial hemiatrophy we have to do with a neuritis of the fifth nerve. The author believes the frost-bite to have been the cause in his own case.

1626. *Bradshaw on the Pathology of Addison's Disease.*—Dr. Bradshaw, in describing two cases of Addison's disease, enumerates the following changes in the suprarenal capsules and semilunar ganglia. *Case* 1.—At the centre of the capsule there was a mass of caseating material surrounded by a zone of inflammatory infiltration, with occasional giant-cells, the whole bounded by a narrow region of normal tissue. The case was undoubtedly tubercular, the symptoms coming on rapidly during the course of dorsal caries. Tubercles were found in the capsules and the retroperitoneal glands. In the ganglion the large nerve-cells were atrophied, their nuclei indistinct, and they contained a large amount of coarsely granular pigment. *Case* 2.—One capsule was found to be almost entirely replaced by a few nodules of chalk, so that no satisfactory sections could be made; the other was small, waxy on section, and showed no trace of its normal structure. It contained a few small masses of granular matter, apparently caseous, surrounded by dense fibrous tissue forming a capsule. In the ganglion the nerve-cells seemed rather scanty; they were pigmented, and the connective-tissue elements were perhaps increased.

1627. *Hunt on Nasal Calculus.*—From an examination of the details of seventy cases the author concludes (1) that nasal calculus in about 85 per cent. of cases has a nucleus, and in 15 per cent. no nucleus is discoverable; (2) that of the nuclei, 80 per cent. are foreign bodies introduced from without, and 20 per cent. have as nuclei some secretion, blood-clot, or bony sequestrum. The small number of cases in which no nucleus was discoverable leads him to suppose that in these the nucleus had become so altered as to escape detection, or had been so small that it was destroyed in breaking up the calculus to facilitate removal.

1628. *Handford on Tubercular Stricture of the Rectum.*—The specimen was taken from a male, aged 17. The chief stricture was in the rectum, within reach of the index finger and two inches in length; a second was at the junction of the jejunum and ileum, and a third in the ileum. They were produced by gradual involvement of the intestine from the outside by the tubercular mass in the mesentery. There were tubercular deposits in the apices of the lungs, in the pancreas and spleen.

1629. *Handford on Dilatation of the Œsophagus.*—The specimen was taken from a male, aged 52, who had suffered from frequent regurgitation of food for five years. The œsophagus was very markedly dilated throughout its entire length, except at its passage through the diaphragm, where it was contracted to very slightly less than its normal size. The dilatation was fusiform in shape, and the diameter of the tube, at about the centre, in the recent state and unopened, was just over two inches. The aorta was much dilated, and the author believes that this vessel may have to some extent pressed the œsophagus against the unyielding central tendon of the diaphragm and so interfered with the free passage of food.

1630. *Crooke on Pulmonary Endarteritis.*—The subject was a male, aged 34. There was dilatation of the right ventricle with hypertrophy. Microscopic examination of the lungs showed—1. Dilatation of the larger and medium-sized pulmonary arteries, much hypertrophy of the muscular coat, and bulgings of the intima, caused by endarteritis and hyaline swelling, with fatty degeneration of the subendothelial connective-tissue cells. The ground substance of the swelling resembled hyaline fibroid material—*i.e.* consisted of a partly homogeneous and partly fibrillated structure, in which branched, spindle-shaped, and a few round cells were embedded. Osmic-acid preparations showed the former to be undergoing granulo-fatty degeneration. 2. The smaller branches—viz., those distributed probably to individual pulmonary lobules—are affected with an obliterative endarteritis. The periarterial fibrous tissue is sometimes extensively infiltrated with small round cells, leucocytes, and lymphoid cells; sometimes it is seen to be much thickened and pigmented, and there is marked collateral hyperæmia of the venules around. 3. The pulmonary veins are dilated, and there is great and general ectasis and engorgement of the pulmonary capillaries throughout the lung. The author suggests that the pulmonary endarteritis and atheroma in the case were produced by the combined effects of two causes—viz., 1. Increased blood-pressure from within. 2. Periarterial thickening and infiltration from without, probably interfering with the proper nutrient supply to the vessel from its vasa vasorum.

1631. *Sutton on Congenital Pharyngeal Tumours.* Mr. Sutton contributes the following interesting cases of teratoma of the pharynx. 1. From head of foal; depended from basi-sphenoid by pedicle formed of striped muscle and fibrous tissue, and consisted of two parts. The upper resembled somewhat a superior maxilla and carried three molar teeth. The lower was made up of two fused mandibles, each carrying three molar teeth. The tumour had also an extra tongue. There were two sellæ turcicæ with pituitary bodies, two cristæ galli with cribriform plates, and four olfactory lobes. An aperture in the skull accommodated the pedicle of the tumour. 2. Pig, with single head and two bodies, with four limbs. The head presented a meningocele posteriorly, and three narial openings anteriorly; the palate had two clefts and a bifid tongue. A tumour hung from the under surface of the basi-sphenoid, which consisted of two mandibles fused together, covered with mucous membrane, presenting hairs, and beset along the outer margins with teeth which had been erupted. A second smaller tumour also hung from the palate; this was composed of fibrous tissue covered with skin, possessing sebaceous glands, and was, in fact, similar to congenital pedunculated pharyngeal tumours of the human subject. 3. Pig, with tumour wedged in between superior maxillæ, presenting unerupted teeth and a piece of pilose skin. This was connected by a fibrous band with a bony mass, covered with pilose skin and mucous membrane presenting unerupted teeth, lying in the floor of the mouth. This adventitious mass represented two supernumerary mandibles fused in the middle line. The tongue was double, one lying on each side of the fused mandibles. On examining the palate was found, lodged in between the maxillæ, a teratoma comprised of coalesced supernumerary maxillæ, containing teeth, and covered with piliferous mucous membrane. This mass was directly continuous with the fused mandibles.

1632. *Hess on Microphthalmus.*—Deutschmann is responsible for the theory which attributes microphthalmus to an intra-uterine inflammation, a sclero-chorio-retinitis; and others have endorsed his opinion. Hess has examined six eyes from four different individuals, and comes to a different conclusion. In none of his cases was there any appearance of inflammation, but on the other hand there was in the three first described cases a connection between the lens or the tissue representing it, and the structures at the back of the eye, formed by a band of connective tissue which was nourished by the central artery of the retina, or a twig from it equivalent to the hyaloid artery. The author believes that the cause of the malformation is to be sought in this atypical development.

1633. *Nunn on the Curves of the Spine.*—The author draws attention to inequality of the lower limbs as a cause of lateral curvature of the spine. As the left lower limb is most often the longest he attributes the so-called normal lateral curvature to the right to that cause. Inequality, he says, in the length of the lower limb is exceedingly common, and notably so in the female sex. With regard to the antero-posterior curves, there is an abnormality which belongs to the list of imperfect developments, namely an absence of the proper backward curve in the upper dorsal region, the spine retaining its infantile perpendicularity. This causes the shoulder blades to appear to project, a deep hollow being found between them.

Bertram C. A. Windle, M.A., M.D.

1634. *Williams on a Rare Case of Morbus Cæruleus.*—Dr. P. Watson Williams reports a rare form of congenital malformation of the heart. The child was born at full time, and for the first few months only a slight degree of cyanosis was observed. She lived seven years. In the heart the two auricles were seen to form practically one cavity; there was no opening between the right auricle and ventricle, nor could any trace of a tricuspid valve be found. The pulmonary artery and the aorta and their valves were normal. The ductus arteriosus was not patent. At the upper extremity of the ventricular septum was a circular patch of the size of a threepenny-bit where the muscular substance was absent, the deficiency being replaced by a fibrous membrane resembling a thickened valve, and having near its centre an opening large enough to admit a No. 8 catheter, some fibrous structures resembling chordæ tendineæ being traceable close to the margin of it. Dr. Williams explains the condition as one of arrested development intervening about the tenth week of fœtal life.

E. Clifford Beale, M.B.

1635. *Codina on Hydatids of the Lung.*—Dr. Xumetra y Codina reports (*El Siglo Medico*, March 1888) a case of this affection in a child of 13. The prominent symptoms resembled those of abscess at the base of the right lung. After four years of progressive wasting and hectic, a quantity of pus was evacuated by the bronchus. This was followed by improvement, and some months later fragments of the cyst-wall and echinococcus hooklets were expelled, with hæmorrhage. The cyst was believed to be about the size of a lemon. Dr. Codina believes that the parasite was acquired from a dog which used to live on terms of extreme intimacy with the child.

Walter Pye.

1636. *Sutton on the Origin of Dermoid Ovarian Cysts.*—Mr. Sutton's researches confirm Poupinel's theory (*see* London Medical Recorder, June 1888, p. 234) that transitional stages can be traced between the common multilocular ovarian cyst and the dermoid cyst. The former is lined with true mucous membrane, which may bear complicated mucous glands. The dermoid cyst is lined with skin, which may bear conspicuous epidermic appendages, as hair and teeth. Some cysts are lined partly with mucous membrane and partly with skin. These facts explain why dermoid cysts are invariably found in the oöphoron, or parenchyma of the ovary, where the multilocular cyst is developed, the supporting evidence being corroborated by the new observations of Mr. Sutton. Not only has he verified the above gradations detected by Poupinel, but he has further traced every stage of change from the membrana granulosa of the normal Graafian follicle to the mucous lining of the common ovarian cyst. Hence, according to him, the Graafian follicle is a mucous crypt which fosters the ovum and may degenerate into a mucous cyst; the latter in turn degenerating occasionally into a cyst lined with skin. In the course of his researches, Mr. Sutton examined a multilocular ovarian cyst in a mare. The paroöphoron, or hilum-tissue, is very distinct and well-developed in Equus; in the specimen in question no cysts were found in the paroöphoron, although the oöphoron or parenchyma was replaced by large cystic cavities. Mr. Sutton quite understands why Graafian follicles may show pathological alterations in their epithelium. He notes how the ciliated epithelium on the surface of a fibroid uterine polypus (pedunculated submucous myoma) is exchanged for squamous epithelium when the polypus protrudes beyond the vagina, the epithelial cells lining the mucous crypts in the polypus retaining their cilia. [The reporter, with Dr. Vincent Harris, once endeavoured to prove that ovarian cysts originated in follicles which had undergone incipient atrophic changes (*Jour. Anat. and Phys.*, vol. xv.). Possibly the death of the ovum may set up changes in the follicle which produce alterations in the epithelium, hence the development of the multilocular cyst as Mr. Sutton has already demonstrated.—*Rep.*]

1637. *Vigneron on a Case of Hydatid Cyst in the Abdominal Wall.*—A laundress, aged 27, was admitted into the Hospital St. Antoine in November 1888, under the care of M. Monod. She had suffered from symptoms of pulmonary disease for five years. Her medical attendant advised her to eat raw meat; to this diet she soon became quite partial. Four years before admission she noticed a tumour in the left lateral region of the abdomen. Until a few months before she entered the hospital this tumour remained small and hard, but then it grew rapidly and caused pain when the patient walked. Drs. Monod and Vigneron found a firm oval tumour, the size of a small hen's egg, above and a little behind the anterior superior spine of the ilium. The integuments moved freely over the tumour which was evidently in the substance of the muscle. The tumour had to be dissected out of its bed in the substance of the external oblique muscle, as enucleation was impossible. It consisted of two distinct chambers which did not communicate. They contained very little fluid, but were packed with a multitude of transparent vesicles, the largest as big as a pea, the smallest no larger than a pin's head. The wound in the muscle was closed with three catgut sutures, the integuments were united by means of silkworm gut. The patient did well. There appeared to be evidence of phthisis in the right apex. [The diet of raw meat would account for adult tænia in the intestine, but not for the presence of hydatid cysts in the abdominal wall.—*Rep.*]

1638. *Hermaphroditic Malformations and Peculiarities.*—A man, aged 23, five feet seven in height, and ten stone ten pounds in weight, had been brought up as a boy. At 12 the smallness of his external parts was first noticed. His instincts became feminine, and he felt periodic discomfort, with no signs of hæmorrhage. His voice was soft, his face full and beardless, and the mammæ larger than in men. The hips were full, measuring nearly forty inches in circumference, or five inches more than the chest at full inspiration. The penis was not one inch long, but nearly two in circumference, the glans, frænum, prepuce, urethra, and meatus normal. The scrotum was rudimentary, the testes undescended. No vulvar cleft could be found, nor could a uterus be detected on recto-abdominal palpation, but the abdominal walls were thick. Dr. Jones looks upon the patient as in some respect a natural eunuch. The same physician describes an instance of a woman with a beard. The patient was a girl, aged 13, who recently died of diphtheria at Detroit. She is said to have menstruated at 3 years of age, and the males of her father's family were remarkable for hairiness. She was covered with a thick growth of soft light-brown hair from head to foot, and grew a full beard, with a less-developed moustache. The breasts and female organs were normal, the hips wide. [A bearded woman may be looked upon as an instance of 'reversion.' In bearded monkeys the distinction of the sexes is very slight. Women are naturally beardless, whilst in men the beard is full in some of the lowest races, very scanty in Chinese and American Indians, yet well-developed in most Europeans.—*Rep.*]

1639. *Mundé on Adeno-myxo-sarcoma or Racemose Myosarcoma Strio-cellulare Uteri.* — Dr. Mundé's case resembled the series described by Pernice (Virchow's *Archiv*, vol. cxiii., part 1, and Recorder, 1888, p. 476), where malignant grape-like masses have been removed or seen on the cervix uteri. Dr. Mundé's patient was a single woman, aged 19, intensely anæmic. For two years she had been subject to profuse watery discharge from the vagina, normal menstruation being absent all the time. A slimy tumour filled the pelvic cavity and widely distended the vulvar cleft. Dr. Dunham removed handfuls of the slimy masses, but in attempting to twist the growth off he felt a firm interior structure and a solid attachment, and the process of twisting caused syncope. Dr. Mundé, a few days later, removed the tumour, together with the enormously hypertrophied cervix uteri from which it grew, by means of a wire écraseur. The central growth was very dense, and creaked as the wire cut through it. The cervical canal lay in the centre of the mass. The patient recovered from the operation, but failed to regain her strength, and, two months later, the tumour had grown again to about half its size before removal. The tumour formed a mass of soft cystic bodies; the drawing given in Dr. Mundé's paper shows it to be very similar, judging from its position and naked-eye appearances, to Pernice's case. Dr. Heitzmann found that it was, microscopically, myxomatous, and, though originally adenomatous, had become sarcomatous (unfortunately this condition is not explained by drawings). Besides this case of Mundé's, Dr. G. Thomas describes an instance of racemose tumour of the cervix which was overlooked by Pernice. [Although no embryonic striated muscle-cells were detected in Dr. Mundé's case, he notes that Pernice had found that, when the tumour reached an advanced stage, these cells were replaced by large sarcoma cells. This appeared to have happened in the tumour removed by Dr. Mundé.—*Rep.*] Alban Doran.

1640. *Turner on a Case of Multiple Growth in the Myocardium.*—In the *Illustrated Med. News*, November 1888, p. 145, Dr. Charlewood Turner contributes the notes of a case of multiple growth occurring in the myocardium. The patient, aged 33, was admitted into the London Hospital in January 1885, in a state of collapse with abdominal pain. He had been a soldier, but had lately been working as a painter, and had a blue line on his gums. Two days before he entered he was attacked with palpitation, the next day with abdominal pain and vomiting, and a few hours after his admission he died. At the *post mortem* examination the heart weighed 13 ounces, the valves were healthy, and the aorta free from atheroma. On the inter-auricular septum was a lobulated, bossy mass, which extended to the inter-ventricular septum. Other nodules of growth were seen in the intra-ventricular septum, and there were others in different parts of the ventricular walls; there were two small nodules in the walls of the left ventricle. Microscopic examination showed an infiltrating corpuscular connective tissue with no special characters. At the borders of the affected areas the myocardium was infiltrated by similar connective growth between the muscular fibres and fasciculi. A very correct coloured plate is also given showing the naked-eye characters of the growths.

1641. *Grant on a Case of Traumatic Aortic Aneurism following Railway Accident.*—In the *Australian Med. Jour.*, September 1888, p. 393, Dr. Grant records an interesting case of aortic aneurism following an injury received in a railway collision. A man, aged 64, was travelling in Europe from March 1885 to November 1886; then he set up in business in Melbourne until the end of January 1887, when he was advised to go for a change to New Zealand, during which time he indulged in active exercise, and returned to Melbourne on April 1, after which he worked at his business every day until May 11, 1887, when he was returning home by an express train which ran into another. When the collision occurred he was sitting with his face toward the engine, leaning slightly forward, his chest resting on his hands on the handle of his umbrella, the point of which rested on the floor of the carriage. He was violently shaken, but did not lose consciousness, and was able to get out of the train; but on attempting to walk up the bank he felt a pain in his chest, and had great dyspnœa on exertion. On reaching home he went to bed and remained there some days, and during the next three months he always suffered from shortness of breath on slight exertion. Three and a half months after the accident he consulted Dr. Turner, who diagnosed signs of aortic dilatation. He was treated with full doses of iodide of potassium, but he gradually grew worse and died suddenly in June 1888. No *post mortem* was allowed. The case led to an action for damages, and a few weeks before the patient died he was awarded £2,300 damages. There can be no doubt that at the time of the collision the aortic wall gave way, and that the aneurism increased rapidly from the date of the accident. Richard Neale, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1642. Demme.—On an Epidemic of Parotitis. (*Wiener med.-chirurg. Centralbl.*, vol. xxiv., No. 5.)

1643. Espine and Marignac.—On Diphtheria. (*Lyon Médical*, tome lx., No. 7.)

1644. Sevestre.—On Diphtheria and Vapour Stoves in a Children's Hospital at Paris. (*Lyon Médical*, tome lx., No. 7.)

1645. Evtükhovsky, Dr. I. I.—On the Treatment of Diphtheria. (*Novostĭ Terapiĭ*, No. 7, 1889, p. 98.)

1646. Ladame, Dr.—On Procursive Epilepsy. (*Revue de la Suisse Romande*, February 1889.)

1647. Smith.—On Constipation in Infants. (*Les Nouveaux Remèdes.*)

Art. 1642. *Demme on an Epidemic of Parotitis.*—The parotitis of this epidemic was very contagious and usually affected all children exposed to it except those who were protected by a former attack. The average period of incubation was 8 to 15 days, but one boy who was brought to the ward from a district in which no cases of mumps had appeared, took the complaint in three days. The duration of the invasion stage was 36 to 52 hours; the symptoms were restlessness and loss of appetite in mild cases, but in severe cases there were intense headache, vomiting, alternate restlessness and somnolence, and even delirium and convulsions. The temperature of this stage was 100° to 101° in mild cases, and 101° to 104° or more in severe cases. The swelling of and around the gland sometimes developed very rapidly—4 to 24 hours; in other cases it was so slow that it reached its maximum only in from 5 to 8 days. As a rule, the hardness was limited to the swelling of the gland itself, the surrounding swelling being of an œdematous character. In the majority of instances both glands were affected, though not in an equal degree. In a limited number the submaxillary and sublingual glands were also involved. The secretion of saliva at the beginning and at the height of the disease, was in a few cases diminished. The lymphatic glands behind and below the jaw were nearly always enlarged, and in anæmic individuals this swelling persisted. The enlargement of the parotid lasted usually from 8 to 14 days. The youngest patient was only 3 weeks old, but the commonest age was from 3 to 7 years. The cases occurred between June 1887 and May 1888, and their total number was 117. Eight were of a severe character, two ending in suppuration of the parotid, while two developed acute nephritis, and one suppurating otitis media. Two patients, a boy, aged 3½, and a girl, aged 7 years, died in consequence of gangrene setting in. The course was much the same in both cases. When the parotidean swelling was at its height a dirty greenish-brown vesicle appeared on the skin; this and its dark blue areola rapidly increased in size and soon developed into an ulcer with a dirty offensive discharge. Progress was very rapid. In the boy, 16 days after the appearance of the vesicle, almost the whole of the parotid gland was eaten away, and the nerves and blood-vessels dissected out. In the girl, the course of the gangrene was not quite so rapid, but there was no other essential difference between them. The gangrene was accompanied by extreme prostration, somnolence, cyanosis, cold extremities, epistaxis, and diarrhœa. The temperature gradually became subnormal.

1643. *Espine and Marignac on Diphtheria.*—These gentlemen give as the result of their researches on diphtheria, that the bacillus of Loeffler does not penetrate into the circulation but produces toxæmia by the absorption into the system of its products. In this they agree with Dr. Roux. The disease is therefore at first local, and the treatment indicated is that by local bactericides. They recommend large doses of salicylic acid and irrigation with large quantities of a 2 per thousand solution of the same.

1644. *Sevestre on Diphtheria and Vapour Stoves in a Children's Hospital at Paris.*—In the *Hospice des Enfans Assistés* at Paris, diphtheria has shown itself with a malignity which it presents nowhere else; but a change is foreshadowed, for, while in the first six months of 1888, 78 cases occurred, in the last six months there were only 13. How can this change be accounted for? By a stove. The conviction forced itself upon the management that diphtheria was propagated by the linen. They, therefore, set up a vapour stove capable of heating objects to 120° C., and thus disinfecting them completely. Every child on admission was made to take a warm bath, and his clothes were heated in the stove; further, everything that had been in the wards was disinfected in the same way, and, as additional precaution, those who had the management of the stove were forbidden to come in contact with those who were employed in the wards. The result was that diphtheria suddenly disappeared and was three months before it was seen again—an unexampled interval of freedom from the scourge. All at once, between Oct. 9 and 27, six children were seized with diphtheria and died. They were all together in the measles ward. The outbreak was attributed to some linen which had escaped disinfection, and greater care was exercised. Afterwards, seven isolated cases appeared, but these might have been introduced from without, as there was constantly a large number of fresh children being admitted. During the last six weeks there have been some very severe cases of diphtheria admitted, but there has been no propagation of the disease from these sources except on the surgical side, and this is the only part that is not disinfected.
Ralph W. Leftwich, M.D.

1645. *Evtükhovsky on the Treatment of Diphtheria.*—In the Moscow therapeutic weekly *Novostĭ Terapiĭ*, No. 7, 1889, p. 98, Dr. I. I. Evtükhovsky, of Keidany, writes that a large number of successful cases fully justifies him in recommending the following method of treatment in diphtheria. 1. The parts affected should be brushed, six times a day, with a mixture consisting of benzoate of soda (1 drachm), eucalyptus oil (1 drachm), and glycerine (1 ounce). Before using, the compound should be each time thoroughly shaken and slightly heated. 2. Another mixture consisting of carbolic acid (xv. gtt.), oleum martis (ʒss.), and lime water (℥vj.) should be inhaled every hour. 3. Besides, sulphate of quinine should be given internally [the dose not mentioned.—*Rep.*]. 4. The patient should take plenty of milk, broth, and wine. Dr. Evtükhovsky admits that the plan recommended is rather troublesome, but any inconveniences are said to be richly rewarded by the excellent results obtained. [*Vide* Dr. N. A. Voronikhin on the treatment of diphtheria in the London Medical Recorder, January 1889, p. 5.—*Rep.*] V. Idelson, M.D.

1646. *Ladame on Procursive Epilepsy.*—In a paper on this subject the author concludes that procursive epilepsy is a form in which the access is manifested by a forward impulsion, usually accompanied by cries and loss of consciousness, and rarely preceded by any aura. It is peculiar to infancy and adolescence. It may persist during several years without degenerating into ordinary epilepsy, and when it does so change, the attacks may alternate, first one form, then the other. The change is, however, inevitable sooner or later. It is, so far, impossible to localise the anatomical lesion, but nothing points to any lesion of the cerebellum as a cause of the malady. This form of epilepsy is most frequent in children presenting some gross anatomical lesion of the encephalon, and it is often complicated by moral perversion. The treatment consists mainly in isolating the child from his family and placing him in a more favourable environment.

1647. *Smith on Constipation in Infants.*—Dr. Smith in *Les Nouveaux Remèdes* recommends the following :—℞ olei morrhuæ, ʒv.; aquæ calcis, ʒv.; syrup calcis lactophosphatis, ʒijss. M. Sig. gtt. xv. to xxx. after each meal.

Alfred S. Gubb.

REVIEWS.

Article 1648.

The Causation of Disease. By Harry Campbell, M.D., B.S.Lond. London: H. K. Lewis, 136 Gower Street. 1889.

Whether Dr. Campbell's readers be prepared to agree with him in all his views or not, they will, at least, be constrained to admit that he has given them a book containing much that is interesting and suggestive. It is an attempt of a kind, now happily becoming more common, to treat of disease as a branch of biology, and from a biological standpoint. The object of this particular book, as its author tells us, is to trace the causes of disease in general, not of any special ailment. In approaching his subject he is careful to impress upon us from the commencement that we have to direct our attention solely to two objects : the cell, or congeries of cells, and the environment. Thus the *cause* of life, he tells us, 'is the sum of the material conditions of the cell and those material conditions of cell-environment which share in the mutual interaction,' but disease is an abnormal form of life, and therefore 'all disease depends upon either 1, peculiarity of cell- or tissue-structure ; 2, peculiarity of cell-environment; or, finally, 3, peculiarity of both.' From this it will be seen that Dr. Campbell takes up the position that purely mechanical explanations suffice to account for all the phenomena of life, normal and diseased. 'Evolution,' he says, 'depends upon simple mechanical causes (*causæ efficientes*). Such a mechanical explanation is, in the language of Hæckel, "one entirely based on natural science." We are thus able to dispense with designing or teleological causes (*finales causæ*).' Moreover, he excludes the will from any part in the matter, since, as he tells us, 'The apparently voluntary efforts of the mind are nothing else than the expression of chemico-physical nerve change, the "voluntariness" being a delusive creation of the mind.' Thus, there is no such thing as free will. All this, of course, if true, simplifies the conditions with which we have to do, and leaves us in a position to conclude that, given a knowledge of the cell-structure and environment of an individual, it would be possible to foretell exactly all that he would do or suffer throughout his existence. This is, we believe, a fair statement of Dr. Campbell's position, and it is one with which we are bound to say we cannot fully agree. To criticise it at all adequately would require space, and an incursion into the regions of metaphysics impossible in this journal; but we may at least say that we are firmly convinced that mechanical and teleological conceptions of nature are not necessarily incompatible, and would refer Dr. Campbell on this point to an essay by Weismann,* whose position as a biologist is recognised, from which we can only spare room for two apposite quotations. 'It would be a great delusion if anyone were to believe that he had arrived at a comprehension of the universe by tracing the phenomena of nature to mechanical principles,' and again, 'Mechanism and teleology do not exclude one another, they are rather in mutual agreement. Without teleology there would be no mechanism, but only a confusion of crude forces; and without mechanism there would be no teleology, for how could the latter otherwise effect its purpose?'

We must now turn to Dr. Campbell's treatment of his two factors. Starting with the structure of the cell, we at once find ourselves face to face with the question of heredity. Now, here we feel bound to make a complaint with regard to the manner in which Dr. Campbell treats us. In his preface he tells us that there are two ways of writing a book, one being to saturate oneself with the literature of the subject, and then sit down and distil its essence from the point of the pen; the other to disregard authorities, save in so far as they are met with in the course of ordinary reading, and evolve thoughts from the inner consciousness without fear of unconscious plagiarism. The latter is the method for which our author expresses his preference, and unquestionably from it we may expect the more interesting book, due allowances being made for the value of the personal factor in any given case. But where the subject is one, like that of heredity, upon which so much work has been expended, it seems scarcely fair to his readers for an author to ignore so much of the labours of others. Dr. Campbell has evidently made a careful study of Darwin and Herbert Spencer, but we do not find a single allusion, throughout this book, to the theories of the

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* On the Mechanical Conception of Nature. *Studies in the Theory of Descent.* English Translation.

German writers of late years upon heredity. We regret this, for we should have been glad to have had the advantage of our author's criticism on the views, for example, of Weismann, as set forth in various important monographs, and especially where those views are at variance with his own. Let us take two examples. Dr. Campbell says that 'if "heredity" were unhampered there would be complete identity among the male offspring born of the same parents, on the one hand, and among the female on the other, each structural type being a certain mean between the parental structures,' but that 'this identity is destroyed by a diversity of environment.' And in a further passage he shows his strong belief that environment is the chief cause of variation. 'The influence of environment disturbs heredity. Were the environment exactly alike for every child born to the same parents, all the children would be exactly alike; save, of course, for such differences as depend upon sex; that is to say, the sons would exactly resemble each other, and the daughters likewise, and, if the world were peopled afresh from another Adam and Eve, under an identical environment for all men on the one hand, and all women on the other, would be exactly alike at corresponding ages.' Weismann,[*] in his various essays, has given quite a different explanation of the cause of variation, which he finds, not in the environment, but in sexual generation, and this view he has worked out in connection with his ingenious explanation of the meaning of the second polar body, in a manner which we cannot do more here than allude to.

Again, Dr. Campbell tells us, 'Of course characters once acquired tend to be inherited.' But this is just the question which is at present provoking so much controversy, and about which such very diverse opinions are held, Weismann,[†] for instance, denying the possibility of such inheritance. Nay, more, the cases which Dr. Campbell cites in support of his argument are those which Weismann, having criticised, rejects as insufficient evidence to prove the inheritance of acquired defects. There are other authors whose names we might mention, whose writings might with advantage have been consulted, but we have chosen Weismann as the best known. We do not wish it to be supposed that we are asserting that one is right and the other wrong, but we think that we have a claim to hear Dr. Campbell's criticism of these opposing theories, and we shall look forward to it in his second edition.

Much that Dr. Campbell has to say about the question of environment is most important and interesting, and perhaps particularly so that relating to the differences between ante and post-partum environment, to the former of which we think scarcely sufficient weight is generally allowed. We do not think, however, that it is responsible for so much as Dr. Campbell would assign to it. According to his view it is this which accounts for the difference between the children of the same couple; and to a certain extent, though not, we think, wholly, this may be true. But the example which he has chosen is not very apposite. The nearest approach to identity is, as he says, in the case of twins, and this he assigns to their identical environment. But true twins, 'homologous twins,' are the product, as is now pretty generally admitted, of the fission of a single ovum, which explains their likeness much more satisfactorily than their common environment does. Twins, which are so by superfœtation, so to speak, and not by fission, are not necessarily similar to one another.

We must now draw these remarks to a close, not for lack of material, but because our space is exhausted. Before leaving his book, however, we feel it our duty to thank Dr. Campbell for the interest which it has afforded us. It is full of chapters and passages containing much that deserves careful thought. As examples we may mention his chapter on the Rhythm of Life, and his admirable remarks on medical education, with which we fully agree. We can assure our readers that they will find much that is suggestive and profitable in the book, whether they fully agree with its conclusions or not.

Bertram C. A. Windle, M.A., M.D.

Article 1649.

Treatise on Diseases of Women. By Alexander J. C. Skene, M.D. London: H. K. Lewis. 1889.

This work will add another leaf to the laurels already gained by our Transatlantic cousins in the field of gynæcology. A somewhat new feature, and one that might with advantage be followed by others, is the illustration of each chapter by several clinical cases described in detail. The general tenor of the book is eminently practical. It is chiefly a mirror of the American school, and is hardly cosmopolitan enough. One of the best chapters is that on Injuries to the Pelvic Floor. The description and illustrations of the operations for laceration of the perinæum and sphincter ani are admirable; still we think some account of Tait's operation, so much practised now, might with advantage be added. For the treatment of endometritis, more especially the corporeal form, about which so much difference of opinion exists, the author prefers mild local applications to the strong caustics so much used. Speaking of sclerosis of the uterus, he has the courage of his opinions, and states, 'so far as my own personal observation goes, I am obliged to say that I have not seen much benefit from any treatment, and have come to look upon the disease as an incurable one.'

Considerable importance is attached to lacerations of the cervix uteri in accordance with Emmett's views. For the restoration of an inverted uterus, Dr. Skene hardly realises how easy reduction is by continuous elastic pressure; possibly he has not seen the cases published in this country by Dr. Aveling and others. Again, in the treatment of prolapse, the cup and stem pessary is condemned, but then the author does not appear to have tried those in which the stem, made of India-rubber, is flexible, and often gives excellent results. Most physicians will agree with him that 'where an operation upon the cervix uteri and pelvic floor has failed to cure prolapse, kolporrhaphy has also been useless.'

Although a very good description is given of the principles of electrolysis and its method of application to fibromata of the uterus, we are disappointed to find but little evidence as to its results, and but few indications as to the cases suitable for its employment. Functional and organic diseases of the bladder are dealt with in a thoroughly exhaustive and masterly manner. Among other things, the construction and use of Bruck's cystoscope, since perfected by Nitze and Leiter, is described. Interesting statistics are given on the results obtained in the treatment of chronic cystitis by cystotomy. The percentage of cures does not amount to more than twenty-four, but nearly all cases are improved by it. In connection with the anatomy of the female urethra, a description is given of two glands found by the author. They are tubular in shape, with a diameter large enough to admit No. 1 probe, French scale, and lie near the floor of the urethra extending from the meatus upwards for ⅜ to ¾-inch. The operation for vesical and urethral fistulæ is beautifully illustrated and carefully described. Last, but not least, is a chapter dealing with the relation of gynæcology to insanity. It is well known that with patients liable to this disease the administration of ether or chloroform will often bring on an attack. It is therefore interesting to find that this does not apply to nitrous oxide gas, but that, on the contrary, an improvement in many cases may be looked for. As a whole, Dr. Skene's book is a most valuable contribution to gynæcology. It is full of practical details, rich in clinical materials, and profusely illustrated.

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[*] *E.g.*, *Die Bedeutung der Sexuellen Fortpflanzung für die Selektions-Theorie*, Jena, 1886; and *Die Zahl der Richtungskörper*, u.s.w., Jena, 1887.

[†] *Ueber die Vererbung*, Jena, 1883, p. 21.

J. Inglis Parsons, M.D.

Article 1650.

Surgical Operations.—Part II. Amputation. Excision of Joints. Operations on Nerves. By Sir William MacCormac. London: Smith, Elder, & Co. 1889.

In the London Medical Record for July 15, 1885, will be found a review of the first part of this work, and we are glad that we can endorse the very favourable remarks we then indulged in. But we are sorry so great a length of time has been allowed to lapse before the appearance of this second instalment of what may claim to be a standard work on operative surgery. We trust the remaining portion may not be long delayed.

Again, the book is remarkable for the excellence and number of its illustrations, and the author is indebted largely to his colleague, Mr. Anderson, for these; but we have again to notice that the many —nearly all—original illustrations are not clearly enough indicated as original. They are nearly all in outline and particularly clear and diagrammatic, as well as being accurate and artistic. The language used is terse and forcible and the arrangement of the subject clear.

As we remarked in the previous notice, there will be points of practical detail in which each surgeon will have his preference for some special course of action, and we cannot expect the author to be in absolute harmony with every teacher; and some of the operations preferred by particular surgeons will therefore miss being noticed by the author. We are, however, convinced that the work will rank very high as the expression of the judgment of a practical surgeon of unusually large experience. It is a pleasant book to read, and an excellent one for reference on the method of performing the operations treated of, and it avoids statistics; perhaps, too, it lays very heavy stress upon German, in preference to English, French, or Italian work, but it is none the less the honest opinion of the author from what he has seen and done himself.

His views about amputations being performed with the object of sacrificing as little of the limb as possible, and not to suit the convenience of instrument makers, may, we think, be carried too far, and a poor man be saddled with a very costly luxury, and this applies particularly to military surgery. His general remarks about excisions are excellent, but we miss a reference to some of the methods of performing special excisions which are now in favour, and this remark applies more particularly to the hip, where no mention is made of the method adopted by Parker and Hueter, and recently strongly advocated. The last section, on operations on nerves, will be read with interest, as this branch of surgery has made great strides. The author uses the term neurotony for nerve stretching. This is no doubt correct, but is so like the term neurotomy, that we confess to preferring that of neurectasy as more distinct. Some account is here given of the pathology of the process, but we think it would have been a help to the reader to be referred to the valuable monograph of Professor Marshall for further information. The author gives excellent diagrams of nerve distribution and of the methods of nerve suture and splicing, of which he has reported some interesting and important cases.

We feel that we have before us a valuable and trustworthy guide, which will be used and read by hospital surgeons, practitioners, and students, with equal interest. The whole, when finished, will be a handsome work, and, as we have before remarked, the illustrations are a credit to English authorship. We shall look forward to the completion of the work with more than usual interest, and probably the newest and most valuable advances in surgery are to come, for we have not yet reached abdominal, cerebral, or spinal surgery, or regional operations, if this should be the arrangement followed. It is difficult to see what will be the ultimate size of the book, and therefore we are glad it should be divided into handy 'parts,' which can be carried without difficulty.

Article 1651.

Transactions of the Obstetrical Society of London, Vol. XXX., for the Year 1888. Part 4. Edited by Percy Boulton, M.D., Senior Secretary, and F. H. Champneys, M.D. London: Published by the Society at their Library, 54 Berners Street. 1889.

This part of the thirtieth volume of the Obstetrical Society's *Transactions* includes the title-page, index, and list of the Officers and Fellows. Amongst the more practical contributions is a long memoir by Dr. John Phillips, 'On the Value of Pilocarpine in Pregnancy, Labour, and the Lying-in State.' He finds, after careful observation of a series of cases, that during the dilating and expulsive stages of labour pilocarpine is equally productive of increase and intensification of labour-pains with ergot, but with more certainty of action and with none of its ill-effects. Cases of simple uterine inertia are the most suitable for its administration. After delivery, and for the arrest of hæmorrhage, the drug is useless. Dr. Matthews Duncan and Mr. Meredith contribute papers on 'The Locking of Fibroids in the Pelvis'; Dr. Herman's experiments on 'The Effect of Glycerine on the Quantity of Secretions poured into the Vagina' are instructive. Plugs—some dry, some soaked in glycerine—were retained in the vagina for a definite time, and carefully weighed. Dr. Herman found that when the secretions poured into the vagina are not abundant the local use of glycerine increases them, when they are abundant glycerine does not increase them. To a contribution by Dr. Cullingworth is appended an instructive discussion on the treatment of extra-uterine fœtation. This part, which concludes the thirtieth volume, includes several pathological and scientific monographs. ALBAN DORAN.

ARTICLE 1652.

Diabetes: its Cause and Permanent Cure. By EMIL SCHNÉE, M.D. Translated from the German by R. L. TAFEL, A.M., Ph.D. London: H. K. Lewis. 136 Gower Street.

IT is difficult to know whether this book should be treated seriously or not. A medical work dedicated to a German Prince! and in which patients are told that in the winter they must be transferred to the Riviera (where the author practises), and in the summer they should go to Carlsbad (where the author also practises), and that in the intermediate period they should seek out 'the superbly-situated Hotel Belle Vue du Lac in the mild and cheerful Zurich.'

To continue, 'I prescribe,' says the author, 'Irish, Roman, Russian, or Turkish baths, as well as a *combination of baths according to a special method*'! and again, 'I have employed with great advantage *my regenerative method*, which is a modification of the method prescribed by Steinbacher, Priessnitz, and Schroth. The nervous system is strengthened by its application; *the sexual potency is revived*; the enfeebled digestive organs are strengthened, &c.' A few pages further on, he says, still in advocacy of the Riviera in winter, that a diabetic patient may 'even in January and February go about without an overcoat.' Is this, one is tempted to ask, a part of the 'regenerative method' just referred to? Our own experience led us to the conclusion long ago that an overcoat was more necessary on the Riviera than in England, and it is difficult to believe a medical author is serious—in the best sense serious—who writes like this. When also a physician writes that his object is 'to produce a *change in the bodily constitution and to regenerate the organism*,' and prints this sentence in large capitals, one can but conclude that such vague and meaningless phraseology is less intended to edify his professional colleagues than to captivate the lay public.

ARTICLE 1653.

Transactions of the American Surgical Association. Vol. VI. Edited by J. EWING MEARS, M.D., Recorder of the Association. Philadelphia: P. Blakiston, Son, & Co. 1888.

THIS volume contains the papers that were read at the meeting of the American Surgical Association, held in September last. The list of seventeen papers, which is headed by the presidential address of Dr. Agnew on the Relation of Social Life to Surgical Disease, contains many important contributions relating to practical surgery. The interest of these Transactions is much enhanced by the full reports of the discussions cn most of the papers, in some of which we find that British surgeons took an active part. As one amongst the most interesting of the papers published in the sixth volume of these Transactions, we would refer the reader to Dr. Keen's record of three cases of cerebral disease treated with more or less success by operation. This record, whilst showing the great advance that has been made by Dr. Keen and others in the diagnosis and localisation of cerebral growths, and also in the general technique of the operations for their removal, seems to indicate the desirability of more fulness and definitiveness in the reporting of the results of such treatment. The contributions to this volume deal with a larger variety of surgical subjects than those of former years, of which an excessive proportion was given up to the subject of abdominal surgery. In most of the papers the authors discuss questions of modern surgical practice, such, for instance, as suprapubic cystotomy, nephrectomy, excisions of large joints, nerve-stretching, and the mutual relations of pregnancy and operative surgery. A paper of much interest in itself, and followed by an instructive discussion, was contributed by Dr. George Gay, of Boston. This deals very fully with the comparative claims to surgical favour of tracheotomy and intubation in the treatment of croup. Almost one half of the pages of this volume is taken up by a contribution on the relation of micro-organisms to injuries and surgical disease; but this, notwithstanding its length, proves very little, save the great industry of the author and the confusing and conflicting records of the results obtained by the numerous observers whose works he has so carefully studied.

W. JOHNSON SMITH.

ARTICLE 1654.

Notes on Physiology. By HENRY ASHBY, M.D. Lond., M.R.C.P., Physician to the General Hospital for Sick Children, Manchester, Lecturer on Diseases of Children, &c., &c. Fifth Edition. Illustrated. Pp. 362. London: Longmans, Green, & Co. 1889.

THE fifth edition of Dr. Ashby's *Notes on Physiology* is not materially different from the former editions, but the text has been revised and some new matter, and seventeen new woodcuts have been added. The appearance of the fifth edition within ten or eleven years after the publication of the first edition, is, doubtless, a proof of the acceptableness of this book to students. Indeed, if students would use these notes on Physiology only in the way almost certainly desired by the author, that is to say, to refresh the memory after having read and mastered larger and more explanatory text-books, the writer of this notice would have nothing to say but in praise of the book. It is an excellent collection of notes, well arranged and well digested. Unfortunately, one finds that by many students it is used simply as a cram-book. As such, if one may be allowed to say so, it is apt to do more harm to a student than a less complete system of notes. For the reason that statements are made shortly and dogmatically about what may be called advanced physiology without explanation, and often in highly technical language. If a student has crammed up his physiology from Dr. Ashby's Notes, in *vivâ voce* he exposes himself to the possibility of talking about things and making use of terms, the explanation of which he has never seen; he thus often unnecessarily complicates what was intended to be a simple question. Scarcely anything is more disastrous at the examination table than this. However, the answer to such a criticism is obvious, namely, that the author, as we have indicated above, never intended his volume of notes to be a cram-book. VINCENT D. HARRIS, M.D.

ARTICLE 1655.

Elements of Histology. By E. KLEIN, M.D., F.R.S., Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital. Pp. 363. Illustrated with 194 Engravings. London: Cassell & Co., Limited. 1889.

A NEW and enlarged edition of Dr. Klein's excellent little book will doubtless be received with the same favour as its predecessors have met with. It is not surprising that very large numbers of the former editions have passed into circulation. On its first appearance, it was at once evident that the book filled an unoccupied place,-being a concise *résumé* of the whole subject, well illustrated, and by a well-known professor of histology. One new feature of this edition is the introduction into the text of ten photo-micrographs, by Mr. A. Pringle, as additional illustrations. Dr. Klein says in his preface that he believes that these are the only really good histological photographs that have as yet been published in any text-book. If this be the case, it will be apparent that photo-micrography has to improve considerably before it will be of much real use to illustrate text-books for students. It is to be doubted whether any of these new illustrations, with the possible exception of fig. 132, which is a very fine example of photo-micrography, will convey to the mind of a student a sufficiently definite idea of the structure of the organ or tissue it is intended to illustrate. This criticism must not be taken to apply to the illustrations as photo-micrographs, but simply to the photo-micrographs as illustrations. The new edition is in all ways excellent, although it must be confessed that clearness has been here and there a little sacrificed to brevity.

VINCENT D. HARRIS, M.D.

ARTICLE 1656.

The Mode of Action and Value of Antipyrine in Typhoid Fever. By N. S. DAVIS, A.M., M.D. New York: Trow's Printing and Bookbinding Co. 1889.

IN this paper, which was read before the Chicago Medical Society, the author briefly records the result of his observations in connection with the use of antipyrine in typhoid fever. He concludes that, although this drug may allay pyrexia, it is inferior to the cold bath or to cold sponging in this respect; that it exerts no specific action on the disease; that the pyrexia *per se* is not the cause of the danger in those cases in which the temperature runs high, and that consequently the depression of temperature produced by it is not of much benefit, except in those cases which are characterised by nervous symptoms. Dr. Davis thinks that the utility of the drug is further limited by the fact that toxic symptoms sometimes occur after its exhibition in small doses, especially in typhoid fever. These views are quite in accordance with those adopted by many authorities on the subject. There is, however, one opinion expressed in this pamphlet which we think open to question. The writer infers that, because the excretion of urine is lessened in amount by the action of the drug and the excretion of urea diminished, therefore waste products are apt to accumulate in the blood. He overlooks the fact that the lessened excretion of nitrogenous waste products is in all probability not due to retention but to diminished production.

ARTICLE 1657.

A Pamphlet on Vaccination. By WILLIAM WOODWARD, M.D., Public Vaccinator to the Worcester District. London: Simpkin & Marshall.

THOSE amongst the lay community who are interested in the subject of vaccination should read this pamphlet. The main facts in favour of the operation are briefly and lucidly set forth, and the author deals also with some of the objections raised by the anti-vaccinationists, showing them to be in a great measure the result of ignorance, which has led them to unduly magnify risks or accidents which are but trifling in comparison with the virulent nature of the disease from which vaccination protects. He points out, moreover, that in many cases the alleged evils have been found upon investigation to be non-existent, and in others to be due to some contemporary derangement or already existing constitutional taint.

ARTICLE 1658.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. BATTY TUKE, M.D., and G. SIMS WOODHEAD, M.D. Volume I. Edinburgh and London: Young J. Pentland. 1889.

THIS is the first volume of what promises to be a very interesting and valuable report from the laboratory recently established in connection with the Royal College of Physicians in Edinburgh. It contains eleven articles, the first of which is an account of the laboratory itself and its fittings by Dr. Woodhead, the superintendent. A number of plans and illustrations render this very comprehensible.

The second paper is by Dr. Hart and Mr. Carter on the 'Sectional Anatomy of Advanced Extra-uterine Gestation,' and is illustrated by three plates taken from their frozen sections: one of a four-and-a-half months' extra-uterine pregnancy *in situ* in the bony pelvis, the other of an entire cadaver with advanced abdominal gestation. Their conclusions will be dealt with elsewhere in this journal. Dr. Woodhead contributes the next paper on 'Mercuric Salts as Antiseptics,' in which he offers the following reasons for the use of biniodide of mercury in preference to the bichloride: 1. It is not so poisonous. 2. It does not form an albuminate, and consequently the whole of the salt is available as an antiseptic. 3. It may be used with either acids or alkalies. 4. It is not necessary that the solution should be made with distilled water; all that is necessary is a slight excess of iodide of potassium. 5. The mercury is not deposited on the skin or instruments, or at least so slightly as not to be injurious. 6. The exact strength of the solution is always known, as its properties remain constant. Dr. Hart deals next with the mechanism of the separation of the placenta, which he believes can be accounted for by a disproportion between the part to be separated and the site of its attachment. Dr. Bruce's paper on 'Absence of the Corpus Callosum' we dealt with in the LONDON MEDICAL RECORDER for March 20, 1889, p. 87.

Dr. Nasmyth has an elaborate paper on 'The Air of Coal Mines,' reprinted from the *British Medical Journal.* Other papers of interest are those of Dr. Helme on the 'Muscular Fibre and Connective Tissue of the Uterus during Pregnancy and the Puerperium,' and by Dr. Woodhead on 'Tabes Mesenterica and Pulmonary Tuberculosis.' We must not omit a well-merited word of praise for the style in which the book is brought out.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1659.

Mayne's Medical Vocabulary. Revised and Enlarged by W. W. WAGSTAFFE, B.A., F.R.C.S. Sixth Edition. London: J. & A. Churchill. 1889.

Mayne's Vocabulary has long held the first place for general utility amongst medical lexicons, and it is unlikely that it will be supplanted so long as its successive editors maintain the principles originally laid down by the author, and keep the work abreast with the march of science. It is, indeed, almost an ideal book of its kind, for not only does it offer, and in the tersest style, everything in the way of etymology and definition, that the inquirer should look for within the pages of a dictionary, but it excludes all that the lexicographer, as distinguished from the cyclopædist, ought to omit. It is obviously a mistake to insert, as is done in a rival volume, such information as the description of the levers of the body, quoted from Huxley's *Elementary Physiology*, or a transcript of Cuvier's *Classification of the Animal Kingdom*, for the space occupied by misplaced matter can only be obtained by unnecessarily swelling the bulk and expense of the publication, or by omitting much that ought to be present.

The new edition is welcomed as a great improvement upon a work that was already excellent. The definitions and derivations of the terms have been thoroughly and carefully revised; many useless or obsolete expressions have been struck out; minor errors, that had previously escaped attention, have been corrected; and a large number of new and indispensable words have been added. Such a task demanded a wide and accurate scholarship, as well as an intimate acquaintance with the modern progress of the medical sciences at large, and Mr. Wagstaffe must be congratulated upon its successful achievement. We can strongly recommend the book to all students of medicine.

ARTICLE 1660.

Papers on Dermatology. By E. D. MAPOTHER, M.D. J. & A. Churchill. 1889.

WE have much pleasure in recommending Dr. Mapother's small book to all readers who appreciate clear writing, suggestive thought, and good clinical record.

The first chapter, that on the vascularity of the skin and the communications of subcutaneous with visceral veins, will be read with interest by those practitioners who still retain a belief, and we hope there are many such, in the occasional value of blood-letting. The *rationale* of the action of this powerful remedy is explained very clearly and concisely. All readers will not know that the mastoid was the usual bleeding point in every form of disease amongst the Egyptians, as appears from the writings of Alpini 300 years ago.

Dr. Mapother shows that if delirium points to active, or coma to passive hyperæmia, and blood-letting is suggested, it can be done on the nasal septum, a place from which salutary bleeding so often arises spontaneously. In no part of the mucous tracts are the vessels so near the surface. It may be noted that epistaxis does not occur from domesticated animals, and in their skulls the foramen cæcum (or, as it might be better named, the superior ethmo-frontal opening) does not exist. The circulation in these creatures is not urged on occasions such as arise in man's brain work, and their horizontal posture renders valves in the veins of the head and neck necessary, whereas man does not possess them. Epistaxis can never be regarded as a mere local flow, but as an escape for congestions of more important parts than the nasal membrane.

Every one must have remarked, the author states, the frequent concurrence of symptoms of gout or of rheumatic gout and eczema. The Chelsea pensioners and the poorer agricultural people of Ireland, exhibit this concurrence on the largest scale. He has seen very few cases of extensive eczema which had not been preceded or accompanied by what is so well-known as acid or gouty, or rather 'pre-gouty,' dyspepsia. There is much reasonableness, he believes, in the belief that the gastro-intestinal mucous membrane may share with the skin the local conditions of eczema, and the effects of counter-irritants on the skin in dyspeptic cases may thus be explained.

We doubt whether the author will secure universal assent for this theory amongst those who see most of eczema, that protean disease which not only tortures the gouty but dispenses its terrors with an impartial hand amongst debilitated persons of all sorts and conditions.

Dr. Mapother's theory of the connection of gout with eczema leads him naturally to have great confidence in the remedies which have repute in gout.

'Lithia,' he remarks, 'is found of the greatest use, as would be anticipated from its extraordinary power of dissolving and combining with urate of soda and uric acid, which can be verified on calculi in the laboratory. It forms over five times as soluble a salt as soda does. It is very difficult to explain why this potent alkali is so much neglected by writers on therapeutics. The superiority as a sedative of the lithium bromide over the others is patent. Lithia never fails while passing out as a urate to act as a diuretic, and the derivative influence from the skin to the more extensive surface of the kidneys can be easily understood. While lithia does not depress the heart like potash, it is, like soda, destructive of red blood-cells. Benzoate of lithia is a salt of great promise in such cases. He has very often applied washes containing carbonate of lithia to eczema in a weeping state, with surprising benefit, presumably from its solvent power over urates.'

In the paper on purpura of epidemic meningitis, as observed in and around Dublin in 1866, 1867, and 1868, Dr. Mapother's observations have a certain permanent value.

In the ataxic or toxæmic form of that disease, he states that the symptoms usually were chilliness or rigor, depression, vomiting, sometimes diarrhœa, sometimes constipation, tongue dry, pulse about 100 and compressible, breathing laboured, skin moist and cool, and restlessness extreme. The purple spots and blotches were at different depths in the skin and the areolar tissue, and were therefore varied in tint. Occasionally the cuticle was vesicated with blood fluids. The legs, hands, face, and back were their commonest sites. Pressure did not, of course, influence the purpuric spots, in the way of fading, nor did it bring them out as in scorbutic subjects.

Again, he quotes with approval the words of Trousseau: 'Eczematous eruptions, rheumatism, gout, and hemorrhoids, and, I may add, gravel, are complaints which may be replaced by asthma and may replace it in them; they are different expressions of one and the same diathesis,' and that 'gravel of the skin' may be the first evidence of the diathesis.

The volume concludes with a short chapter on the Irish sulphur spas.

NOTES ON BOOKS.

ARTICLE 1661.

Mediastinal Disease. By HOBART AMORY HARE, M.D. (Pennsylvania). Fothergillian Prize Essay, 1888. Pp. 150. Philadelphia: P. Blakiston & Co. 1889.

THIS work, which has already received the recognition of the Medical Society of London by the award of the Fothergillian Medal, is a carefully compiled record of 520 cases of mediastinal diseases, other than cardiac and aortic affections, with analytical remarks by the writer, bringing out into better relief the principal points of interest. The method adopted consists of a tabular statement of the cases of each affection separately, followed by a commentary upon it. Dealing first with carcinoma, the writer shows that it is the most common of all the morbid growths of the mediastinum, and that it is prone to attack persons of all ages, and especially males. In common with almost all mediastinal affections the disease is more often manifested in the anterior mediastinum. The symptoms produced are for the most part those of pressure upon the various vascular and nerve structures in the mediastina. Sarcomata follow next in order of frequency of morbid growths, and are often found in the posterior mediastinum when secondary to similar disease elsewhere. Carcinomata and sarcomata in the anterior mediastinum have a tendency to grow inwards, and sometimes encroach largely upon the heart and lungs before their presence is indicated by any affection of the chest-wall. Inflammation of the mediastinum is shown to be generally the result of direct violence. When suppurative changes take place there is always a remarkable degree of intense pain which may at times have a pulsating character; but the seat of such pain is often misleading as to its source. In these affections the general symptoms of fever, dyspnœa, cyanosis, and cough, are more marked than the pressure symptoms, such as are produced by tumours. Chronic mediastinal abscess may remain in a quiescent state for years. In dealing with lymphomata, the writer appears to draw a definite pathological distinction between lymphoma, lymphadenoma, and lymphosarcoma. He calls especial attention to the peculiar range of temperature which has been recorded in a few cases of lymphadenoma affecting the mediastinum only, consisting of daily fluctuations of temperature, pulse, and respiration, sometimes with the rise in the morning and sometimes the reverse. He attaches such importance to this sign that he considers that the diagnosis may safely rest upon it alone, where other symptoms indicate the presence of a tumour. Two cases only are quoted in support of this view.

Mediastinal hæmorrhages and many miscellaneous affections are, in like manner, tabulated and discussed. Generalisations upon statistics compiled from miscellaneous sources must always be received with caution, and this is fully recognised by the writer himself, who claims only to have put together as complete a *résumé* as possible on a subject of which the materials are few and scattered about in the literature of many countries. Dr. Hare may be congratulated on having thus produced an enduring landmark in the study of the subject.

E. CLIFFORD BEALE, M.B.

ARTICLE 1662.

Elements of Practical Medicine. By A. H. CARTER, M.D. Fifth Edition. London: H. K. Lewis.

WHEN a text-book has reached its fifth edition, it has amply justified its existence, and its popularity has shown that it fulfils the requirements of many students. This book is so much appreciated by students working up for their final examination because it forms a reliable and portable *résumé* of their previous reading, that it is especially desirab it should be free from errors and dubious statements such as that epithelioma of the œsophagus is rare and that a scirrho-encephaloid cancer (whatever this may mean) is the usual form the growth takes. Also that the upper third is the usual seat of the stricture in that organ.

Among minor omissions may be noted that affection of the auditory nerve is often accompanied by vertigo, and the value of antipyrin in migraine while the paramount importance of early surgic interference in suppression of urine from impacte calculi, and in intestinal obstruction, is not adequately emphasized. While congratulating the author on the continued success of his book, we think it is still capable of much improvement by devoting the space now occupied by vague topics such as cerebral anæmia and congestion, to more practical matters, such as meningeal hæmorrhage and the secondary complications of otorrhœa, alcoholic paresis, syphilitic cerebral lesions, &c., which in this edition are most imperfectly discussed.

G. N. PITT.

ARTICLE 1663.

Transactions of the Clinical Society of London. Vol. XXI. London: Longmans.

THE yearly volumes of this society form a valuable index of recent advances both in diagnosis and treatment.

The success of surgical interference with the peritoneum is well brought out by Mr. Barwell's and by Dr. Knagg's and Dr. Clarke's cases of acute suppurative and tubercular peritonitis which recovered completely after the peritoneum had been laid open and washed out. Intestinal obstruction as usual forms the subject of several papers. Among the more rare conditions which are recorded especial mention should be made of the cases of acromegaly reported by Messrs. Godlee, Hadden, d Ballance, and those of aptyalism by Messrs. tchinson and Hadden.

r. Fowler's case of valvular heart-disease of y-four years' duration should certainly be a ning against giving a too gloomy prognosis in h cases. G. N. Pitt.

Article 1664.

gestive Neurasthenia. By E. G. Whittle, M.D. London: H. K. Lewis.

E author desires in this *brochure* to lay before profession a method of treatment which in his ds has been most successful in the relief of a s of nervous disorders, of which the following the main symptoms:—

he patients are restless, sleep badly, fail to contrate their attention on any subject in hand; e is a constant feeling of discomfort in the head, ch is often described as one of numbness, fulness, ightness. There is sometimes throbbing, espelly after stimulants or meals. These symptoms ally occur in men who are active, intelligent, and gtic, between the ages of thirty and forty, and y be considered as indicative of brain fatigue.

e has found that the application of a dozen hes over the mastoid processes and temples, or enesection, will often remove the distressing ptoms as if by magic, and quickly lead to rery, although in some cases it may require to be eated.

hese cases are confessedly difficult to treat, and method which will relieve even some of them is e welcomed. G. N. Pitt.

NEW PREPARATIONS.

EVEREST'S 'PERLES DE MER.'

ER the appellation of 'Perles de Mer,' Messrs. est & Co., of Oxford Circus Avenue, have duced a new 'Tabule,' claimed to be almost absolute specific against sea sickness, and far rior to cocaine, antipyrin, and the usual reme. The formula is supplied to medical men on ication. Messrs. Everest have numerous tesnials from individuals of both sexes, who have ed the value of the *Perles de Mer.* They now to make the preparation as widely known as ible, in view of the terrors of the Channel pase which must be braved by the myriads of people o propose to visit the coming Paris Exhibition.

NOTICE OF MEETING.

TERNATIONAL CONGRESS OF THERAPEUTICS AND MATERIA MEDICA.

Congress will be held at Paris between Aug. 1 and 5, 1889, at *Hôtel des Sociétés Savantes* 28 Rue Serpente. All medical men, cists, and veterinary practitioners who shall have announced intention and paid their subscription of 10 francs, will be add to take part in the proceedings.

Committee of Organisation comprises MM. Moutard Martin, t; Dujardin-Beaumetz, vice-president; Constantin Paul, y-general; P. G. Bardet, assistant secretary-general: Labbé, y of the Therapeutical Section; and Blondel, secretary of the Medica Section.

Congress will be divided into two sections—one Therapeutical, Materia Medica. Each of these sections will meet sepa in different rooms for the morning meetings, at which particular , left to the choice of members, will be discussed. The day will take place in common, and will be devoted to the disn of questions proposed by the Committee of Organisation.

Question.—Analgesic Antithermics. Chemistry and pharmacology of these bodies; their physiological action and therapeutica uses; laws permitting the formulation of a relation between chemica function and physiological function. (Reporter, Dujardin-Beaumetz.)

Second Question.—On the antiseptics suitable for particular species of pathogenic microbes; relative value of antiseptics and their special action; researches on their mode of absorption, and the best methods of administering them. (Reporter, Constantin-Paul.)

Third Question.—Cardiac tonics. Their nature and special action; relative value of plants and their active principles—alkaloids and glucosides. (Reporter, M. Bucquoy.)

Fourth Question.—New drugs of vegetable origin recently introduced into therapeutics. (Reporter, M. Planchon.)

Fifth Question.—Unification of the weights and measures used in formulæ; on the utility of an international pharmacopæia. (Reporter, M. Shaer, of Zurich.)

Members of the Congress who wish to read a paper are requested to furnish the secretary with the title before May 15.

All papers and discussions will be published in a volume, which will be printed under the direction of the Committee of Organisation, and a copy of which will be forwarded to each member.

An exhibition of simple drugs bearing on questions proposed by the Committee for discussion will take place at the meeting place of the Congress during the session. It will be organised under the direction of MM. Adrian and Blondel.

All communications should be addressed to Dr. Bardet, 119 *bis*, Rue Notre Dame des Champs, Paris.

MISCELLANY.

Royal College of Physicians of London.—Sir Andrew Clark, M.D., F.R.S., has been re-elected president of the college.

Imperfect Vaccination.—The *Bristol Medico-Chirurgical Journal* (March 1889), in reviewing some books on vaccination, says:—'Vaccination has got into undeserved discredit by the way in which its details have been carried out by thoughtless or careless operators. It is much to be desired that all vaccinations should be taken out of the hands of private practitioners, and allowed to be performed only by public vaccinators. The difficulties in the way of this much-needed reform could be easily overcome. Vaccination, as an important branch of preventive medicine, should be under Government inspection. Not only is there great difficulty, privately, in obtaining trustworthy lymph, often necessitating a resort to unauthorised sources, but, in deference to the sentimental objections of ill-informed parents, there are many practitioners of good social standing who are not ashamed, by vaccinating by one or two small insertions, to earn a cheap popularity, although thereby a serious danger is added to the life of a child thus made unfit to successfully resist a possible attack of small-pox. There are also doctors of a lower grade who set themselves up in unwholesome opposition to the Public Vaccinator, and, by performing the operation for a degrading fee of sixpence or a shilling, with a vaccination also much reduced in quantity—and therefore in quality—draw off a considerable number of ignorant mothers from the Vaccination Station, the efficiency of which becomes impaired through a greatly diminished attendance seriously limiting the selection of lymph, and the proper management of which becomes well-nigh impossible. In the light of Marson's figures (Seaton's *Handbook of Vaccination*, ed. 1868, p. 216; McVail, p. 36; Woodward, p. 15) confirmed by all after-experience, conduct such as this, in various walks of professional life, seems little short of criminal, and has now reached such appalling magnitude as to urgently call for Government interference. If vaccination is to be a reality, and not merely something which leads its subjects into a fools' paradise, the State must ensure, by an inspection through properly-qualified officials, that it is carried out in all ranks of society in a thoroughly efficient manner. [In support of the contentions in this article some very interesting evidence, drawn from the experience of the London small-pox epidemic of 1881, is to be found in the Annual Report for that year of the Medical Officer of the Local Government Board.—Ed.]

The Theory of Heredity.—At a recent meeting of the Royal Society of Edinburgh, Mr. J. A. Thomson gave a most interesting paper on the history and theory of heredity. It is usually allowed that there is a general resemblance between a child and one of its parents. Many have observed that, while the child has certain individual traits, it sometimes had in it the general character and idiosyncrasy of a grandfather or a grandmother; in fact, there seems a constant tendency of offspring not to resemble its parents so closely as its ancestors. The problem, then, is as to the combination in the child of two opposing elements—the individual character and the physical, and, to some extent, constitutional heredity. The germ cell in an embryo is different from all other cells; and modern biologists have insisted on the fact of germinal continuity, in accordance with which a certain number of cells were set apart to remain unchanged, and to form the reproductive cells of the next generation. Weissman, the German biologist, holds that no individually acquired characters can be transmitted. Mr. Thomson holds a medium view between that of Weissman and that of Galton, and is of opinion that, while some cells transmitted from parent to child are intended for the building up of the individual by rapid propagation under the action of assimilating food, there are other cells which are retained in the offspring undeveloped, to be kept intact for the purpose of reproduction.

SUSPENSION TREATMENT IN LOCOMOTOR ATAXY.—In the *Lancet*, December 1883, p. 1036, Mr. John Marshall, in the Bradshaw lecture on the relief of pain by nerve-stretching, brought forward the fifteen cases which Dr. Motschutkowski had treated by suspension for ten minutes thrice a week with very marked results. These statements appear to have attracted very little notice until quite recently, when M. Raymond, during a visit to Russia, was much impressed with the value of the treatment and brought it under M. Charcot's notice. The patient is simply suspended by means of Sayre's 'Jury Mast,' at first for half a minute, progressively increasing to three or four minutes (a much shorter period than in the original cases). Two days intervene between the suspensions. By raising the arms every fifteen or twenty seconds greater traction is exerted upon the spinal column. During the past three months eighteen tabetic patients have been thus treated with fourteen successes, eight of which were most remarkable. The ambulatory powers were at once restored, and after ten suspensions became permanently so. Romberg's symptom disappeared after twenty or thirty suspensions, together with vesical troubles and lightning pains, while the sexual powers returned. Neither knee jerk nor pupillar reaction became normal. In many hospitals a treatment that promises so much is now being tried, and soon we shall be better able to judge of its true value.

THE CAUSES OF LUNACY IN DEVONSHIRE.—The second annual report of Dr. Rutherford, medical superintendent of the Exeter Asylum, comprises some valuable and interesting statistical tables, amongst which is a table showing the probable cause of insanity admitted during last year. The 'moral' causes embrace domestic trouble (including loss of relatives and friends), 8; adverse circumstances (business anxieties and pecuniary difficulties), 2; mental anxiety and worry, and overwork, 5; religious excitement, 2; love affairs (including seduction), 3; and fright and nervous shock, 2. The 'physical' causes include intemperance in drink, 9; accident or injury, 1; old age, 3; other bodily diseases, 5; previous attacks, 7; hereditary influences ascertained (direct and collateral), 11; unknown causes, 14 cases. The forms of mental disorder embrace epilepsy (34), general paralysis (8), mania (92), melancholia (21), and dementia (36). Among the males the largest number were labourers, and among the females the numbers above units were—2 housewives, 2 sempstresses, and 10 no occupation. Forty of the patients belong to the Church of England, 8 were Wesleyans, and 2 Plymouth Brethren, one each only belonging to other religious persuasions. Of the 197 patients in the asylum last December 116 were single, 65 married, and 16 widowed. Dr. Rutherford again points out the importance of early treatment. He says:—'Many patients who could soon have been cured of their insanity if th had been sent to the asylum immediately after its ou break will probably remain here for life. The qui lunatics, and those who are regarded by the public a harmless, are frequently either detained at home or in th workhouses, though their insanity requires early treatme as urgently as that of violent insane persons.' T principles pursued at Exeter Asylum in the treatment patients consist, briefly, in endeavouring to bring t physical condition to its highest state of perfection, a in the provision of healthy employment, exercise, a amusement. Great attention is paid to medical treatm and new and improved methods.

THE CENTENARY of SIMON OHM.—A committee been formed of members of the Royal Society, with L Rayleigh as its president, to co-operate with the lo committee appointed in Munich to promote the erectio a statue to the celebrated physicist Georg Simon O An appeal has been issued by the Munich commi which sets forth that—'In the year 1889 a century have passed since the birth of the physicist Georg S Ohm (born at Erlangen, March 16, 1789; died as fessor at the University of Munich, July 6, 1854). discovery of the laws of the electric current was not performance of the first rank from a scientific poi view, but it soon became of the highest practical i ance. Ohm's laws, by shedding a brilliant light subject which had hitherto been enveloped by the d darkness, replaced by well-calculated methods uns doubtful theories, and thereby rendered that po natural force, electricity, serviceable to the civilising of mankind. The wonderful advances in the applic of the electric current, in telegraphy, in electric lig and in all other electro-technical branches of whi have been the admiring witnesses in the last dec could only be accomplished on the safe basis of O laws. The vast importance of Ohm's discoveries i versally recognised nowadays. Georg Simon Ohm the son of an intelligent blacksmith, who had for devoted his leisure to mathematical and philoso studies with such success that he was able hims initiate his son in the mysteries of mathematics. Hi following in his footsteps, was mainly self-taught as mathematics and physics were concerned, and, trai the school of independent thought, he was the more to enter upon the career of a scientific explorer and coverer. But to the fact that he belonged to no school or set, as well as to his modest and retiring it must be ascribed that his own countrymen found value almost too late. We may say, in fact, that only more than thirty years after his death, his name has that universal recognition which it deserved during hi time. Ohm was engaged in various places as tea mathematics and physics without being able to obt appointment as university professor, a position for the scientific turn of his mind and his excellent te capacities so eminently qualified him. From Got and Neuenberg, in Switzerland, he returned to his place, Erlangen, where he was for a short time e as private tutor at the university. In 1827 he pub the chief work of his life, "Die galvanische Kette matisch bearbeitet" (The Galvanic Chain Treated M matically), and soon after that he resigned his maste For six years he retired into private life, and was appointed professor, and soon after rector, of the berg Polytechnic School. At last, when he was years of age, five years before his death, he was app professor at the Munich University.' The Munich mittee conclude their memorial by making an appeal those who acknowledge as a general obligation honour to grand accomplishments furthering the and physical development of mankind, to contribute share towards the erection of a monument worthy o great German philosopher. In England Profess Carey Foster and Professor John Perry have consent act as secretaries and to receive subscriptions.

The London Medical Recorder.

ARTICLE 1665.

MONTHLY MIRROR OF MEDICAL SCIENCE.

MEDICINE.

Endo-auscultation.

PROFESSOR AURELIO BIANCHI* has introduced a new method of physical exploration, which he anticipates will lead to important results in the domain of physiology as well as in that of clinical medicine. This method, which he terms 'endo-auscultation,' consists in utilising the ordinary œsophageal tube as a means of auscultating the gullet and stomach, and through them to a certain degree the heart and lungs. By passing an œsophageal tube provided at the upper extremity with a bifurcated gum elastic tube fitted with ear-pieces, as in a binaural stethoscope, down the gullet into the stomach, sounds can be heard which, according to Dr. Bianchi, indicate a smooth or rough condition of the mucous surfaces over which it travels, the presence of foreign bodies, diverticula, tumours, &c. The respiratory murmur and the heart-sounds are also audible, and can thus be studied from a different point of view from that afforded by ordinary stethoscopic examination. According to Bianchi, conclusions can be drawn from the weakness or absence of the respiratory and cardiac sounds as to the condition of the walls of the œsophagus and stomach, or, on the other hand, as to the functional activity of the thoracic organs. Any little addition to our means of diagnosticating obscure conditions of the gullet and stomach will be welcomed by clinicians, but it is doubtful whether endo-auscultation will be as fruitful of valuable results as Professor Bianchi expects, as it is obvious that just in those cases where it would be likely to be most serviceable it will be difficult or impossible to apply it.

Exophthalmic goitre.

A case recently published by Dr. Hale White † seems to shed some light on the pathology of this disease, which has hitherto been shrouded in utter darkness. A woman, aged 31, who had suffered from the disease in a typical form for many years, died in Guy's Hospital, and a necropsy was made six hours after death. The spinal cord and cervical sympathetic presented nothing particular, but marked changes were found in the medulla. At the level of the lower part of the olivary nucleus, just under the posterior surface of the medulla, there was evidence of slight inflammation. Immediately under the posterior surface of the medulla, extending from the middle line as far out as the restiform bodies, which were slightly implicated, were numerous hæmorrhages. These seemed almost entirely limited to the posterior superficial part of the reticular formation, but there were two or three small deeper ones. According to Dr. Hale White this is the first case recorded in which lesions have been found in the central nervous system in association with exophthalmic goître, and he concludes that the disease is due to changes in central parts of the floor of the fourth ventricle, which ordinarily escape detection because they are so fine.

Inhalations of cold air in hæmoptysis.

Dr. P. de Tullio, assistant to Professor Cantani in the University Clinique at Naples, has lately suggested * a method of applying cold air directly to the interior of the lungs in cases of pulmonary hæmorrhage. The apparatus consists of a metal box through which run several tubes, which communicate with an outer larger tube leading to a mouthpiece, which the patient holds between his lips. The box is filled with ice, or with a mixture of snow and salt, so as to cover the tubes. Air is then pumped with a suitable bellows into the tubes, and in its passage through the box containing the refrigerant substance it becomes cooled down to 0° Centigrade. This is ascertained by means of a thermometer introduced into the tube at some distance beyond the box through an aperture which can be closed with a cork. Dr. de Tullio reports three cases in which severe hæmoptysis was arrested by this plan, when drugs, ice to the chest, and the other usual measures had failed. It does not, of course, cure the condition on which the bleeding depends, but it is an effectual remedy for the symptom.

SURGERY.

Restoration of the bladder after excision.

At the Surgical Congress recently held at Bologna, Professor G. Tizzoni, of the University of that city, and A. Poggi gave an account of some experiments they had made on dogs, with the view of ascertaining whether the bladder could be removed and an efficient substitute constructed by operation. First of all laparotomy was performed, and a loop of small intestine about 7 centimètres in length, with its mesentery attached, was isolated by two transverse cuts, washed out with a carbolised solution, and tied at both ends, one extremity being fixed in front of the neck of the bladder. The two ends of the divided gut were then stitched accurately together by circular suture. The dog soon recovered from the operation, and a month later the second stage of the experiment was performed. The ureters were separated from the bladder, and the latter was completely removed. The loop of intestine destined to be the new bladder was then cut across at the lower end and stitched to the neck of the bladder. The ureters were then turned into the artificial bladder. A slender elastic drainage-tube was placed in the urethra to carry off the urine during the first few days. The animal recovered perfectly, and gradually acquired control over its new bladder, and when shown to the Congress, two months later, showed no sign of incontinence. The operation has been repeated with success on several other animals, and Drs. Tizzoni and Poggi are hopeful that it may be applicable to the human subject.

Treatment of Diaphragmatic Hernia.

Professor Postempski (*Riforma Medica*, April 25), whose extensive experience of stab wounds shows how freely the knife is used in Rome, has lately successfully treated a case of traumatic diaphragmatic hernia by a somewhat bold procedure. A boy, aged 14, on March 4 of the present year received a stab two centimètres long in the eleventh left interspace; five or six centimètres of omentum escaped from the wound. The wound was enlarged to the extent of 12 centimètres, and the eleventh and twelfth ribs were forcibly drawn apart so as to bring the upper surface of the diaphragm into view. A wound, 1½ centimètre long, was seen on the vault of the diaphragm, by the edges of which the omentum was strangulated. The protruding omentum was ligatured and cut off, and the stump pushed back into the abdomen. The wound in the diaphragm was next stitched up with sutures passed through the whole thickness of the muscle. The pleural cavity was carefully cleaned, and the wound in the chest-wall brought together with deep sutures passing through the parietal pleura. No drainage-tube was inserted. Although pneumothorax developed when the chest was opened, and emphysema of the left side of the thorax extending up to the neck came on when the wound was closed, the patient recovered rapidly, and was shown to the Roman Academy of Medicine twenty days after the operation. If the wound is higher than it was in this case, it may be necessary to make a 'window' in the chest-wall by dividing two or more ribs in front and behind and raising the portions thus loosened together with the overlying tissues in one solid flap.

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* *Gazzetta degli Ospitali*, March 27 and 31, 1889.

† *British Medical Journal*, March 30.

* *Riforma Medica*, May 8, 1889.

Electricity in the Treatment of Cancer.

Dr. J. Inglis Parsons reports [*] four cases of cancer in which the growth seemed to be arrested by a powerful interrupted voltaic current. Dr. Parsons suggests that all tumours may be in the first instance composed of cells formed in the normal process of repair, but that, having escaped from the control of the nervous system, they take on independent life and proliferate without check. Most tumour-cells show a decided tendency to degenerate, and Dr. Parsons thought this tendency might be encouraged by electricity. His method of procedure is as follows. Under an anæsthetic, the current is passed through the tumour and all the tissues for some inches round it by means of fine insulated needles, so as not to injure the skin. A battery of 70 cells with an electro-motive force of 105 volts is used; the intensity of the current at first is 10 milliampères, gradually increased to 600 milliampères and flashed through the growth in every direction from 50 to 100 times. The pulse and respiration are carefully watched, as, if the heart is not healthy, considerable cardiac irregularity may be caused. The effects produced by the electricity are cessation of growth, gradual disappearance of pain, some shrinking and hardening of the tumour and enlarged glands, followed by improved nutrition and better general health. The growth does not disappear, but remains an inert mass, consisting, Dr. Parsons thinks, of fibrous tissue only. The advantages claimed by him for this method are (1) that there is no destruction of the normal tissues, and if recurrence take place, its progress can be immediately stopped; (2) patients can go about the day after the application; (3) the current can be passed through almost any part of the body, and growths can thus be arrested which cannot otherwise be treated. All the patients were women; three of them suffered from mammary, and one from uterine, cancer. In two of the former cases the diagnosis was confirmed by Mr. Bryant, whilst in the uterine case it was endorsed by Drs. A. W. Edis, Travers, and Gerald Harper. In one case there has been no recurrence after eight months, while in another which was pronounced to be beyond surgical help, the patient has remained perfectly well for three months. The most striking result perhaps was in the case of a woman, aged 62, suffering from cancer of the left breast and corresponding axillary glands. As she had a presystolic *bruit*, with irregular, weak, and intermittent pulse, it was not thought safe to push the application to the breast beyond 300 and afterwards 400 milliampères, whilst a strength of 600 was applied to the diseased mass in the axilla. The latter has been quiescent ever since it was treated, six months before the date of the paper, while it again became active in the breast a few weeks after the operation. While these results, few as the cases are, are distinctly encouraging, it is obvious that a considerable time must yet elapse before the arrest of growth can be pronounced definitive.

Paget's Disease of the Nipple a Parasitic Affection.

It is well known how intractable this affection is, and how often, indeed almost invariably, it leads to the development of cancer. Various theories as to its nature have been propounded by Butlin, Thin, Dühring, and others, some supposing it to be eczema of the nipple spreading into the galactophorous ducts, others a disease *sui generis*. Dr. J. Darier now claims [*] to have proved that it is parasitic in character. If epidermic scales are taken from the diseased surface and treated with dilute ammonia or bichromate of ammonia, round bodies surrounded by a refracting membrane will be seen among the epithelial cells, and frequently within them. These bodies have a diameter equal or superior to that of the cells; their investing membrane contains a single mass of protoplasm, or more or less numerous corpuscles. These bodies are certainly coccidia. In epithelioma of the nipple, the granulations contain similar parasites. M. Darier suggests that this discovery may be the first step towards the elucidation of the nature and mode of origin of some epitheliomata.

Article 1666.

JACOBI ON THERAPEUTICS OF INFANCY AND CHILDHOOD.[†]

Intermittent Fever has the same symptoms in older children as in adults and is readily recognised; in infants its diagnosis is more difficult. The type in them is usually quotidian, but it may be irregular. The sweating is frequently by no means profuse, but the fever is apt to be very high. The first symptom may be a convulsion. The treatment consists in the administration of quinine, especially the tannate, which is tasteless. For the chronic form arsenic is the best remedy. Obstinate cases may be treated with eucalyptus or ergot.

Typhoid Fever.—Preventive treatment consists in attention to the drains, in boiling all water or milk used for drinking purposes, in disinfection of the fæces, and in isolation of the patient. It is still doubtful if the disease can be aborted. The early administration of a large dose of calomel as recommended with this object is at any rate highly beneficial. Where, as frequently happens, there is constipation throughout the disease, calomel should be given in small doses of ¼ to ⅓ a grain, repeated several times a day. The general treatment includes keeping the room cool; the windows should be open and screens should be placed round the bed. The sheets must be smooth, and this can be managed by pinning the corners and sides to the mattress with safety pins. At an early period, the whole surface of the skin should be washed with water or with alcohol and water. The hair should be cut short and plenty of water may be given to drink; if the tongue is very dry, ten minims of dilute hydrochloric acid may be added to each tumblerful. No solid food must be given. The diet must consist of milk, broths, barley water, &c. Older children may have one or two soft boiled eggs or meat juice. As a general rule, more albuminoids than carbo-hydrates must be given, and, if necessary, pepsin and muriatic acid may be added. The tendency to complications with bronchitis requires that the patients be turned from their backs to their sides, and *vice versâ*, every few hours. Otherwise, they should not be moved much. Defecation should take place in the recumbent position and straining should be forbidden. Very high temperatures in children are commonly better treated by the warm than the cold bath; or a cold pack around the trunk may be applied; the feet, however, should be kept warm and a stimulant should be given. In such cases as develop sopor at an early period, together with high temperature, the pouring of tepid or cold water over the head is very beneficial. Of medicinal antipyretics kairin and thallin cannot be recommended, and any such drug must be given in small doses, frequently repeated, and combined with a stimulant. Such are salicylate of sodium, antipyrin, antifebrin, phenacetin, and quinine, and combinations are often more effective than single drugs.

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[*] *British Medical Journal*, April 27.

[*] *Progrès Médical*, April 20.

[†] *Archives of Pediatrics*, vol. v., No. 12.

For tympanites cold applications are serviceable, as are also enemata of ice-water, aromatics, or turpentine. Puncture of the intestine by means of the hypodermic syringe is dangerous when the muscular coat is paralysed and the consequent distension excessive; in other cases it is unnecessary. Diarrhœa must be checked if severe. It may be treated by antiseptics, as naphthaline or salol, with or without a little opium; in other cases, acetate of lead, or tannic or gallic acid, is indicated. Constipation appears to be more common in America than in Europe. It is best treated by repeated doses of calomel, castor-oil, or enemata. Hæmorrhages are not very frequent in children. They must be treated by abstention from food, ice-bladders to the abdomen, and, internally, alum or lead with opium and digitalis. Subcutaneous injections of ergotin are of doubtful value, and have several times in the author's experience occasioned pyæmia and metastatic abscesses.

The tendency to heart failure in typhoid is so great that precautionary measures should be taken in all cases. They consist in the administration of digitalis, strophanthus, convallaria, sparteine, caffeine, &c. The last must not be given where there is hyperæmia of the brain. Camphor is an excellent stimulant; in cases of emergency, its subcutaneous administration works admirably in ether (10 per cent.) or almond-oil (20 per cent.) solutions. Carbonate of ammonium disorders the stomach more frequently than camphor is apt to do. Brandy and whisky, when of good quality and well diluted, hold the first rank, but they must not be continued too long or cirrhosis of the liver may result. When the heart is still acting, but the pulse flagging, nitroglycerine will be found a vigorous remedy. But whatever remedy be used, the patient must be kept perfectly quiet and recumbent.

Cerebral complications must be relieved by keeping the head cool, cutting the hair short, and doing away with feather pillows. The application of ice-water directly to the head in small children is not tolerated for long; it may give rise to collapse. When there is the slightest brain complication not depending on the infection itself or on anæmia, no alcohol, opium, or caffeine must be given on any account. The head must be kept high and leeches may be applied to the mastoid processes, or, better, to the septum narium.

During convalescence, sudden changes in feeding must be avoided. Fluid diet should be given exclusively for ten days after the fever has disappeared, then white meats, plain puddings, and jellies may be added. Patients must not get up for a fortnight after the fever is gone. If the spleen remains large, a relapse is to be feared, but it will not in any case regain its normal size until the third week of convalescence.

RALPH W. LEFTWICH, M.D.

ARTICLE 1667.

BALNEOLOGY AT BERLIN.

THE following report of the proceedings is from the *Berliner klin. Wochensch.*, No. 11, 1889 (Dr. Brock). The Congress commenced its proceedings on March 2 under the presidency of Professor Liebreich. It was resolved that the 'balneological section' should be known henceforth as the 'Balneological Society.'

The first paper was on 'mountain illness,' by Dr. von Liebig of Reichenhall, and contained a new hypothesis on the causation of this illness, which affects persons unaccustomed to mountains at a height of 3,000 mètres (nearly 10,000 feet) and upwards. In small degree, the symptoms are quick pulse, rapid breathing, and feelings of constriction and weariness; in higher degree, giddiness, nausea, loss of strength in the legs, finally 'overfilling' of the nervous system and the escape of blood from the superficial capillaries. The author showed that the same symptoms may be caused, at lower level, by violent exertion, and that these symptoms, caused at higher levels without any or with very slight exertion, are due to the rarefaction of the air, the expirations being unconsciously quickened under a lower atmospheric pressure, whereas the greater pressure at lower levels afforded greater resistance to the expired air, and this made the respirations slower. The increased frequency of respiration at higher levels was involuntary, and the respirations became more shallow to compensate for it, hence the lungs became more contracted, and they accommodated less blood. Hence ensued venous stasis and deficient oxydisation. That less oxygen reaches the lungs when rarefied air is breathed is quite true, and this helps to increase the distress, but it is not the main cause of it. A person must be accustomed to the atmosphere of higher levels before a normal respiration occurs under the altered conditions of atmospheric pressure.

Herr A. Loewy (Berlin) read a paper 'On the Influence of Saline Aperients on the Gaseous Exchange in Man.' The apparatus used in respiration was on the Zunz and Geppert principle, and Hempel's method of gas-analysis was employed. The results of experiment on sixteen persons showed always an increased gaseous exchange after taking Glauber's salts. The increase affected equally CO_2-excretion, and O-consumption. With the same dose the effect was different at different times. It was caused by increased peristaltic movements, and subsided when after action of the bowels they become more tranquil. The author's theory is that the increased intestinal supply which follows the use of Glauber's salts takes place at the expense of the organism (that salt being incombustible) and—since according to some of Voit's experiments the bodily weight is not affected by the action of the salt—at the expense of the body-fat. Hence the use of saline aperients at cure-resorts, already practically approved, is theoretically justified. [An active discussion on this paper ensued.]

Herr Schott (Manheim) read a paper on 'The Treatment of Basedow's Disease.' The essence of the disease, the author surmised, lay in derangement of some hitherto unknown cerebral centre. Iron and quinine were the best remedies amongst drugs. But the galvanic current (electric baths and otherwise) had been highly successful, and deserved a trial in every case. Since Trousseau's recommendation, hydro- and balneotherapy have been in favour, and of late a mountainous home is advised by many. The psychic treatment and a strengthening diet were not to be neglected.

Herr von Corval (Baden-Baden), spoke on 'Treatment by suggestion.' The speaker had assisted at 800 hypnotic sittings under the direction of Dr. Wetterstand of Stockholm, and was now a believer in their efficacy. Every one could be hypnotised, though not in equal degree; deep sleep was unnecessary, and the consequences were not merely palliative but often radical. The hypnotiser must keep his mind firmly fixed on the desired aim, or he would fail. Many nervous diseases were greatly benefited (except hysterias and melancholic neurasthenias). The pains in locomotor ataxy were greatly relieved, also alcoholic drinkers had been made to refrain from their evil ways. Stammerers were quickly and permanently cured. In conclusion the hearers were begged to try the method.

Herr Groedel (Manheim) 'On the Influence of Baths upon the Electric Excitability of Muscles and Nerves.' The cold freshwater bath lowers the electro-cutaneous sensibility, but increases the galvanic and faradic excitability of nerves and muscles. The warm bath has an action just the reverse. The presence of mineral constituents (4 per cent.) and of CO_2 about 3 grammes per litre, also lowered the excitability.

Herr Ewald (Berlin) treated of 'Chronic Gastric Catarrh and its Treatment at Mineral-Water Resorts.' The most varied dyspepsias were included under the above term, but, strictly speaking, the term 'gastric catarrh' was a misnomer. The so-called mucous membrane is not a mucous membrane, but a glandular membrane, constituted by the apposition of glandular excretory ducts connected together by a scanty mucous-membrane epithelium. We should therefore speak of inflammation, not of 'catarrh.' This inflammation was either productive or degenerative. The latter was a mucous degeneration of the glandular epithelium, which was in part replaced by so-called mucous cells. Accordingly the speaker would speak only of acute and chronic gastritis and neuroses of the stomach. Under the term 'catarrh' was comprised the following conditions: I. Chronic gastritis. 1. Simple derangement of glandular function and its consequences; delayed absorption, muscular hypertrophy (especially at the pylorus), dilatation, &c. 2. Mucification of the gland-cells, with muscular atony. 3. Cirrhosis. 4. Atrophy. II. Nervous conditions connected with hyper-acidity, hyper-secretion, absence of acidity and atony. As regards mineral waters in connection with treatment, there were four groups to be distinguished, viz.: 1. Pure salt springs, cold and warm, with more or less CO_2. 2. Alkaline or alkaline-chloride waters. 3. Alkaline saline waters. 4. Aperient waters (Die Bitterwässer). The first kind might be used when a stimulating effect was desired. Alkaline or alkaline saline waters were indicated in hyper-acidity or hyper-secretion. Lastly, in cases where the intestinal activity was deranged, alkaline saline or purely aperient waters were to be used.

Herr G. Rosenbaum, in his paper 'On Hydro-electric Baths,' said that the erroneous opinion has hitherto prevailed that the body of the bather is a worse conductor than the water. Careful experiments showed that the available current-strength through the body was between a third and a quarter of the whole current-strength.

Herr Edgar Gans (Carlsbad), 'Investigations on the Influence of Saccharine on Gastric and Intestinal Digestion.' After careful experiments, saccharine in the usual doses was found to be innocent. In cases where the powder was not well borne its solution was recommended—viz., as saccharinate of sodium, which is soluble in cold water. It was found useful in intestinal decomposition-processes; alkaline intestinal fluids with saccharine added remained unaltered for several weeks.

Herr Stifler (Steben) discoursed 'On Carbonic Acid Needle-baths,' and Herr Lindemann (Heligoland) 'On the Sanitary Significance of North Sea Bathing Resorts.'

Dr. Hermann Weber was made an honorary member on account of his services to balneology and climatology. E. J. Edwardes, M.D.

Asserted Cure of Neuralgia by Rotatory Mirrors.—Dr. Luys, Physician at the Charité Hospital, records a case of dental neuralgia cured by rotatory mirrors. The patient was a man of thirty-five, who after an attack of typhoid fever became anæmic. He was subsequently troubled with frequent neuralgia and shooting pains in the teeth, in which no signs of decay were visible. Sulphate of quinine, antipyrin, anti-neuralgic pills, and injections with cocaine were employed without effect. Insomnia and great cerebral excitement were present. One of the sensitive teeth was extracted; two others were filed. The nerves in the region of the ear were finally sectioned. Finding every kind of treatment unsuccessful, M. Luys had recourse to the rotatory mirrors. The *séance* lasted from twenty to thirty minutes, and was followed by considerable relief to the patient, who simply lost consciousness without closing his eyes. After eight sittings the improvement was most remarkable. The swelling in the face disappeared, the patient's strength returned, and the pain in the head was sensibly diminished. The patient's condition has continued improving.

ARTICLE 1668.

MATTHES ON THE HYPNOTIC EFFECT OF SULPHONAL.*

THE following is a report by Dr. M. Matthes from Prof. V. Ziemssen's clinic in Munich. In all, 27 cases were treated with 99 single doses of sulphonal. Two of the cases concerned normal individuals, while the other 25 suffered from agrypnia, which was caused in 4 cases by disturbed circulation, in 5 by tuberculosis, in 4 by apoplexy, in 2 by infectious diseases, in 2 by purely nervous disturbance, in 2 by neuralgia, in 1 by chronic spinal meningitis, in 1 by progressive paralysis, in 1 by hepatic cirrhosis, in 1 by tabes dorsalis, in 1 by delirium tremens, and in 1 by pernicious anæmia. The dose was usually from 1 to 2 grammes, 5 grammes being given in 4 cases in order to determine by the sphygmograph any possible influence of the drug on the pulse. The following were the results. In 21 of the 27 cases (78 per centum) there was a hypnotic effect, which was complete (*i.e.* at least 6 hours sleep) in 49 per centum, and mostly complete in 18 per centum, the sleep lasting generally over 6 hours but sometimes less, and incomplete in 11 per centum; while in 22 per centum there was no such effect at all. Secondary symptoms appeared in 2·2 per cent. Sometimes it happened that the first doses were without effect or nearly so, while subsequent doses produced a very strong effect. In one patient who had suffered for 14 years from nervous agrypnia, sulphonal had to be abandoned for a time on account of serious secondary symptoms resulting. Later, two very small doses (0·5 gramme) were given, and the patient remained free from such symptoms, though in complete hypnosis; but after the third dose the old mischief recurred, so that it appears as if sulphonal has a cumulative effect. A further indication of this is the fact that even the second night after the dose sleep was sounder than usual.

The following are the different effects in different diseases. There was no effect at all in such serious diseases as pernicious anæmia, phthisis pulmonum cavernosa with a distressing cough, typhoid fever at its height, and delirium tremens. The effect was incomplete in incipient phthisis with a cough and pains in the chest, in a case of great excitement after apoplexy and in tabes dorsalis. On the other hand the effect was very great in heart diseases with or without compensation disturbances, in purely nervous agrypnia, in chronic spinal meningitis, in the first stage of progressive paralysis, in apoplexy, and, what is particularly striking, in a case of trigeminus neuralgia, and in one of intercostal neuralgia with herpes zoster.

Rossini's assertion that sulphonal lowers the sensibility of the bronchial mucous membrane requires further proof, for Matthes found that, with only one exception, the cough irritation always reduced the effect of the drug. Salgo's opinion that sulphonal acts little as a sedative in maniacal and delirious cases corresponds with Matthes's experience.

The duration of the effect of sulphonal ranges from half an hour to three hours; it is therefore slower and more gradual than that of chloral hydrate. Sulphonal has no appreciable effect on the temperature, the pulse, or the frequency of respiration, and does not affect the reflex action of the patella and pupil. Without influencing the quantity or specific gravity of the urine, the drug has the effect of tinging the urine with green in some cases. The pulse was not affected by the drug. Nor were irregularities observed in heart diseases after the use of sulphonal.

The secondary symptoms were usually lassitude and depression, and in some cases tinnitus aurium, headache, and violent vertigo. These, however, generally disappeared in the course of the day. Phthisic patients generally bore sulphonal well, but it had generally no effect on the cough. In two cases there was vomiting. The doses varied much in which sulphonal produced secondary symptoms and sleep; thus, in a healthy man 5 grammes had no effect, while in another case one-tenth of that dose caused extraordinarily violent symptoms. There appeared to be no getting accustomed to the drug. In about 50 per cent. of the cases Matthes succeeded in curing agrypnia for a considerable time even after the patient had stopped taking sulphonal. The following is Matthes's summary of his observations: 1. Sulphonal is a useful hypnotic, though not absolutely certain in its effect. 2. It is preferable to other hypnotics on account of its odourlessness and tastelessness, and its negative action on the vital organs. 3. Undesirable secondary symptoms are infrequent and unimportant. 4. The dose must be varied, according to individual idiosyncrasies. For most patients 1 gramme suffices to produce a hypnotic effect without secondary symptoms. If the latter occur, the dose must be made smaller. 5. It is advisable to give the drug at least an hour before going to bed, as its effect is slow. 6. If pain of non-neuralgic origin or distressing cough is the cause of agrypnia, sulphonal is useless. But in many neuralgic affections it appears to have a very good effect.

JOHN ELLIOTT.

ARTICLE 1669.

NOTES ON SULPHONAL.

IN the *Therapeutic Gazette*, April 1889, p. 247, attention is drawn to the value of sulphonal as a hypnotic, of which it is, without doubt, one of the best, but, like all powerful agents, cannot be used indiscriminately. Dr. Shick has made some interesting experiments as to its physiological action, and in the *Jour. of Nervous and Mental Diseases*, January 1889, he published the following conclusions. It does not affect the irritability of the motor nerves. It does not alter the muscle curve. The sensory nerves are left intact. It depresses reflex activity mainly by an action on Letschenow's centres; occasionally it exalts reflex excitability. It acts as a narcotic. The pulse is usually somewhat accelerated. The arterial tension after a temporary fall is considerably increased. Respiration is depressed; section of the vagi does not alter the effect. These facts tend to place sulphonal before chloral, as it does not prove so dangerous to the heart and respiration as chloral. In the *New York Med. Jour.*, March 1889, Dr. Burnett publishes some notes showing some of the disadvantages met with in the use of this drug. He himself took a 30-grain dose, which in an hour produced sleep, lasting eleven hours. On waking he suffered from dizziness for a time, and all day he suffered from muscular weakness and defective power of co-ordination. In cases of melancholia the results are not satisfactory. In the case of a lady, aged 42, suffering from insomnia due to worry, 30 grains of sulphonal were given at bedtime every night for a week. It produced good sleep, but was followed each morning by anorexia, slight headache, and, on the fifth day, by muscular inco-ordination. These symptoms gradually increased, becoming so severe on the seventh day that the medicine had to be discontinued. Dr. Burnett believes sulphonal to be a reliable hypnotic in cases of mania, the maniacal stage of paresis, delusional insanity, &c., but it is not suitable in cases of melancholia, especially if accompanied with marked depression. The effect of the drug is more profound after the third dose, given six to twenty-four hours apart. In a small number of cases it produces disorder of the digestive secretions. It is to be hoped that medical men will not give up using this drug if they happen to meet with failures, as it is only by trying it repeatedly, and finding out the class of cases in which it acts beneficially, that any future success in its use can be hoped for. RICHARD NEALE, M.D.

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* *Medicinisch.-Chirurgisches Centralblatt*, No. 17, 1889.

ARTICLE 1670.

SYMINGTON ON THE NORMAL ANATOMY OF THE FEMALE PELVIC FLOOR.*

IN the mesial plane the pelvic floor is, as a rule, about an inch thick. At the sides it varies in different situations, but it is always thicker than in the middle line, and near the lateral wall of the pelvis is generally from two to three inches in thickness. Its comparative thinness in the middle line is partly due to its upper surface being generally concave from side to side ; but it is mainly owing to the presence of a median fissure on the under surface extending from the front of the pubes, below the mons veneris, backwards as far as the posterior aspect of the coccyx. The lateral walls of this median depression are formed mainly by skin, and their degree of apposition depends largely upon the position of the thighs, whether abducted or adducted. In front of the perineal body, and between the labia majora, this median fissure is known as the pudendal or vulval cleft; while behind it forms the natal cleft, being situated between the two nates. The vulval cleft opens below, between the labia majora. It is bounded above in the middle line by the glans clitoridis with its prepuce, by the tissue between the glans and the orifice of the urethra, and by the lower edge of the urethro-vaginal septum. In front of this septum is the orifice of the urethra, and behind it the entrance to the vagina. The posterior boundary is the anterior aspect of the perineal body, the lower part of which on lateral traction presents a transverse fold—the fourchette. The depression above the fourchette and below the entrance to the vagina is known as the fossa navicularis. On the lateral walls of this fissure are the labia minora, which, beginning in front at the clitoris, may extend backwards to the fourchette. The labia minora appear to vary, not only in their length but also in the distance of their attachment from the lower opening of the vulval cleft. According to Hart, both labia majora and minora are composed of skin, and on the inner side of the base of the labium minus is a white line indicating the junction of skin and mucous membrane ; so that below this line the walls of the vulval cleft are formed by skin, and above it of mucous membrane. The part of the vulval cleft bounded by mucous membrane corresponds to what is often called the vestibule. The lateral walls of the vulval cleft are usually in contact, even when the thighs are abducted. There is, however, no muscular tissue to maintain them in apposition. External to the integument these walls are composed mainly of fat, which, however, is traversed by a number of fibrous and elastic bundles. At the sides of the upper part of the cleft the vestibular bulbs intervene between the mucous membrane and the fat.

In addition to the vulval and natal clefts there are three slits in the pelvic floor—viz., the urethra, the vagina, and the anal canal. The two former open below into the vulval cleft, and the latter into the natal cleft.

The urethra is a small transverse fissure, which does not to any appreciable extent weaken the floor. The vagina in the greater part of its extent is in the form of a transverse slit, so that its walls are anterior and posterior, and lie in close apposition. In the female pelvis described the breadth of the vagina was 1½ inches a little below the middle of its length, and three-quarters of an inch nearer the os uteri externum it was a trifle narrower. Its anterior and posterior walls are described as triangular, with the base upwards and the apex at the introitus. It must be remembered, however, that the apex is very blunt, and that the diminution in the transverse diameter of the vagina near its lower end is to a great extent compensated for by certain foldings of the vaginal walls in this situation. The vaginal slit is undoubtedly the main source of weakness in the female pelvic floor. Owing, however, to the fact that it passes very obliquely from below upwards and backwards, the general effect of the intra-abdominal pressure is to press its anterior wall against the posterior. Only about the lower half of the vagina is in the pelvic floor, the upper portion being above the floor.

The anal canal is an antero-posterior slit situated between the perineal and ano-coccygeal bodies. It is about an inch in length, and cuts the pelvic floor at nearly a right angle to its antero-posterior axis. This axis in the posterior part of the floor is directed forwards and downwards, while the anus runs downwards and backwards. Intra-abdominal pressure, therefore, will tend to open rather than close this canal. This source of weakness in the pelvic floor is compensated for by the relation of the lower end of the rectum to the anus, and by the presence of powerful sphincter muscles. The anal canal is normally merely an antero-posterior slit, while the lower end of the rectum has a distinct transverse diameter, so that the anterior rectal wall or the contents of the lower end of the rectum will be supported by the tissues at the sides of the canal.

In the mesial plane the pelvic floor is formed from before backwards by the anterior urethral wall and the tissue connecting it with the lower part of the pubic symphysis, by the urethro-vaginal septum, by the perineal body, and by the ano-coccygeal body. Mesial sections are not well adapted for displaying the connections of the anterior part of the pelvic floor with the anterior wall of the pelvis, as the pubo-vesical and triangular ligaments are not so well developed in the mesial plane as they are a short distance on either side of that plane.

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* SYMINGTON, J., M.D., F.R.S.E.—A Contribution to the Normal Anatomy of the Female Pelvic Floor. (*Obst. Soc.*, Edinburgh, January 1889.)

The upper limit of the pelvic floor can easily be defined and separated from the pelvic viscera, both in front and behind. Thus from the pubes backwards nearly to the urethral orifice the floor is bounded alone by the pelvic fascia, which is separated from the bladder by loose fat and areolar tissue. Again, from the coccyx forwards, nearly as far as the anal canal, the rectum is separated from the floor by loose cellular tissue and fat. Between these points, however, the attachment of the pelvic viscera to the floor is more intimate. Thus in a mesial section the anterior urethral wall is seen to be continuous with the anterior wall of the bladder. Behind the urethra the firm mass of tissue forming the urethro-vaginal septum is continuous above with the base of the bladder and with the upper part of the anterior vaginal wall. The perineal body in a similar manner is connected above with the upper part of the posterior vaginal wall and the anterior rectal wall, while behind the anal canal the posterior wall of the lower end of the rectum is continuous with the anterior part of the ano-coccygeal body. Between the lateral wall of the pelvis and the bladder, vagina, and rectum the pelvic floor is limited above by the layer of pelvic fascia stretching from the side wall of the pelvis to the abovementioned viscera.

The most important muscles in the pelvic floor are the levatores ani, but the accounts of their arrangement and functions will be found to differ greatly. Savage divides each levator into two portions, which he names the pubo-coccygeus and the obturator coccygeus. I believe that these two portions differ not only in their arrangement but also in their function. The pubo-coccygeus arises from the posterior surface of the pubes and the posterior layer of the triangular ligament. Its fibres pass backwards on the side of the lower part of the vagina, and on the side of the anal canal to the last two pieces of the coccyx. A few of its innermost fibres turn inwards in the perineal body in front of the internal sphincter of the anus. Behind the anus and in front of the coccyx there is a partial blending of fibres of opposite sides in the middle line.

The pubo-coccygei act as sphincters of the lower part of the vagina and of the anal canal, but they cannot compress the upper part of the vagina nor the rectum. They also draw upwards and forwards the perineal body and coccyx.

The obturator coccygeus consists of those fibres of the levator ani that arise from the pelvic fascia between the pubes and the ischial spine. Its fibres run backwards and inwards to the coccyx. These fibres have no direct action upon any of the pelvic viscera. They constitute a thin layer of fibres, which, in addition to raising the coccyx, can elevate the pelvic floor a little after it has been depressed.

The bulbo-cavernosus is sometimes called the sphincter vaginæ. Taking its fixed point in front, it may have a slight influence in drawing forwards the perineal body, but its main function is evidently the compression of the vestibular bulb, and it certainly does not exert any appreciable influence upon the lumen of the vagina.

An examination of the series of coronal sections shows that fat enters very largely into the construction of the pelvic floor, for in all of them a large wedge-shaped mass of fat is seen on each side. The apex of the wedge is directed upwards towards the pelvis, and the base is connected with the skin forming the inferior boundary of the pelvic floor. These masses of fat evidently act as elastic cushions supporting the structures internal to them, but capable of displacement and compression in order to allow of the opening up of the slits in the pelvic floor. When the thigh is adducted, a groove is found extending from before backwards between the labium majus and the inner side of the thigh. Except in these subjects, the bottom of this groove is directed upwards and outwards, so that the labium majus rests partly upon the inner side of the thigh, which thus assists in closing the vulval cleft, and supporting the pelvic floor.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1671.

DUCHAMP AND THE SURGEONS OF LYONS ON EXTIRPATION OF THE CANCEROUS UTERUS.[*]

DR. DUCHAMP recently read before the Société des Sciences Médicales de Lyon a monograph on extirpation of the cancerous uterus through the vagina. He states that the operation was first done in France, the operator being Récamier. Dr. Duchamp agrees with Dr. John Williams in the opinion that cancer of the cervix tends to spread laterally rather than to pass up the uterus, and to recur in the tissues around the uterus after amputation of the cervix rather than in the uterine stump. Infected glands lie in the connective tissue near the broad ligaments. In total extirpation the uterus is cleanly dissected from its surroundings: hence these glands are certainly left behind; for in the dark recesses of the pelvis, the surgeon (to use Dr. Duchamp's own words) cannot go on a gland hunt—*chasse aux lymphatiques*—as he may so easily do when he removes a scirrhous breast. Some of the good results following the destruction of cervical cancer by caustics, with or without the knife or *écraseur*, seem to depend on the extension of the destructive agent laterally so as to involve the infected glands and pelvic connective tissue. In cases of this kind the upper part of the uterus is probably still free from any trace of cancerous infection when the cauterisation is carried out. Evidence tends to prove that the infection of the uterine tissue occurs late in cancer of the cervix.

On the principles and theories just recapitulated Dr. Duchamp bases his practice in cases of cancer of the cervix. He begins by dissecting away the anterior part of the cervix from the bladder until the level of the utero-vesical fold of peritoneum is reached. Then he cuts through the cervix at that level. Should the cut surface or the exposed canal prove to be free from cancer, he completes the operation as a supravaginal amputation of the cervix. Should there be cancerous growths on the exposed parts, he extirpates the uterus through the vagina. He has performed the latter operation four times, all the cases recovering from the surgical proceeding; but three were undertaken within five months of the publication of his report. The fourth survived extirpation of the uterus six months, and died not through recurrence of the cancer but from uræmia. One ureter had been included in a ligature, and a ureteric fistula formed in consequence. Dr. Duchamp attributes the good results, which he and others can claim, to the limited and accessible area of peritoneum which is wounded, and to the free drainage afforded by the ligature-threads and the forceps. Plugs of iodoform gauze introduced into the wound also insure drainage, and likewise antisepsis.

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[*] *Lyon Médical*, April 14, 1889.

Thus Dr. Duchamp agrees with Dr. J. Williams in maintaining that cancer spreads laterally as a rule, and differs from the majority of German authorities, who find that the endometrium soon becomes cancerous (Abel), or at least subject to endometritis glandularis with free formation of new blood-vessels (Fränkel, Thiem, Eckhardt). In the discussion which followed the reading of Dr. Duchamp's memoir, Dr. Mollière stated that vaginal extirpation of the cancerous uterus was uncertain and dangerous; besides, the normal history of undisturbed cancer of the uterus remained uncertain, an assertion which M. Augagneur disputed. The latter surgeon was of Dr. Duchamp's opinion, pointing out how Koeberlé and Tédenat had found that the glands of the broad ligament were always affected when neoplasms developed in the uterus. This theory, however, favoured a preference for supravaginal amputation of the cervix. Dr. Poncet was in favour of extirpation, he had twice removed the uterus through the vagina. 'One patient died some time afterwards from diffusion of the cancer over the abdomen; the other, recently submitted to operation, remained in a very satisfactory condition.' The family history and duration of the disease before operation ought to be carefully considered.

M. Rendu was not in favour of vaginal extirpation of the uterus. The operation was not unsatisfactory as to immediate results. Küster's statistics (1883) gave a mortality of 15·6 per cent. in 778 cases. Martinet, reviewing, in 1888, 311 cases performed by himself, Schröder, Fritsch, Olshausen, &c., records a mortality of 15·1 per cent. The mortality remained similar in cases published by Richelot, Pozzi, and Terrier. Unfortunately recurrence generally occurred within the year after operation. Certain cases where recurrence did not occur for two or more years, at the end of which unusually long interval the case was reported, must be accepted with caution, as errors might have been made in diagnosis. [Two years ago much discussion was raised in Germany on this point. One operator advocated and practised extirpation of the uterus even when a very small ulcer could be seen on the cervix. Extirpations avowedly undertaken for non-cancerous diseases of the uterus do not come within the scope of the present argument.—*Rep.*] In ten successful cases where Terrier operated,[*] recurrence occurred within a few weeks or months in seven. In one it occurred at the end of a year, in a second in a year and nine months, and in one not until two years and nine months. Comparing the mortality and speed of recurrence with the same factors in supravaginal amputation of the cervix, the latter was, in M. Rendu's opinion, preferable. Lastly, when the cancer was in its earliest stage, and extirpation most likely to prove permanently successful, the patient, unlike an ovarian cyst case, was not ready to agree to undergo a severe operation.

ALBAN DORAN.

ARTICLE 1672.

ABEL, FRÄNKEL, AND THIEM, ON THE ENDOMETRIUM IN UTERINE CANCER.

NOW that radical operations for the relief of uterine cancer are so frequently undertaken, the precise nature and course of the disease are questions of high interest. The relative merits of total extirpation of the uterus and supravaginal amputation of the cervix really turn upon one important point, the site of recurrence as determined by experience and comparison of the after-histories of cases where these operations have been performed. If it be certain that after supravaginal amputation of the cervix recurrence rapidly takes place in the stump, it is evident that total extirpation of the uterus, if not much more fatal in its immediate results, is preferable. Dr. John Williams[*] declares that recurrence does not take place, as a rule, in the stump, but in the adjacent connective tissue. The secondary deposit was found, in his cases, to be separated by perfectly healthy tissue from the equally healthy mucous membrane of the portion of the canal left in the stump.

In fact, Dr. Williams would maintain that the cancerous process, originating in the cervix, does not extend up the cervical and uterine mucous membrane as mere theorising would lead us to suppose. Some German observers have come to the same conclusion, after examination of specimens illustrating operative proceedings on the cancerous uterus. We avail ourselves here of an excellent abstract, published in the *Deutsche med. Zeitung*, Feb. 4, of the recent writings of Drs. Abel,[†] Fränkel,[‡] and Thiem.[§] Dr. Abel examined seven specimens of uteri removed by Professor Landau, on account of cancer of the vaginal portion. In all cases he detected much disease of the mucous membrane; in three a distinct sarcomatous (*sic*) degeneration of the endometrium. On this evidence Dr. Abel maintained that total extirpation of the uterus should be performed in all cases of cancer of the vaginal portion. Dr. Fränkel, of Hamburgh, examined six cancerous uteri, obtained in a Hamburgh infirmary. Like Abel, he detected advanced changes of the endometrium in cancer of the cervix. He did not, however, consider the changes to be cancerous, but maintained that they represented glandular and interstitial endometritis with a decided tendency to the formation of new blood-vessels in the mucosa. Nevertheless, on account of the general pathological changes which he discovered, he felt bound to advocate total extirpation in cases of cancer of the cervix.

Dr. Thiem, of Kottbus, Lusatia, is also an advocate of total extirpation in any case of uterine cancer. He prefers, like Landau, the Péan-Richelot method, where ligatures are not employed, and where hæmorrhage is suppressed by hæmostatic forceps. Dr. Thiem advocates vaginal extirpation of the uterus in all cases of uterine cancer as long as that operation is technically feasible. He would not abstain, like Fritsch, when the appendages are infiltrated. Yet Dr. Thiem examined five uteri removed for vaginal cancer and found that the endometrium had undergone certain changes which, like Fränkel and Eckhardt (Halle) he interpreted as inflammatory, contrary to Abel's opinion. His preference for total extirpation of the uterus over supravaginal amputation of the cervix is, therefore, hard to understand. Dr. Saurenhaus, after examining specimens in Professor Olshausen's wards, came to the conclusion that the changes in the endometrium in cancer of the cervix were non-malignant.

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[*] *Revue de Chirurgie*, May 1888.

[*] *On Cancer of the Uterus.*

[†] 'Ueber das Verhalten der Schleimhaut des Uteruskörpers bei Karzinom der Portio.' *Arch. für Gynäk.*, vol. xxxii.

[‡] 'Ueber die Veränderungen des Endometrium bei Carcinoma cervicis uteri.' *Ibid.*, vol. xxxiii.

[§] 'Beiträge zur Indikationsstellung und zum Verlauf der vaginalen Totalextirpation sowie Mittheilungen über das Verhalten der Körperschleimhaut beim Krebs des Scheidentheils.' *Der Frauenarzt*, November 1888.

Alban Doran.

Article 1673.

SHORT CONTRIBUTIONS TO BACTERIOLOGICAL TECHNIQUE (SCHILL).

Some of the suggestions made by Staff-Surgeon Dr. Schill, of Dresden, in *Centralbl. für Bacteriologie*, No. 10, vol. v., March 1, are worthy of note by those engaged in the practical study of bacteriology. The first is in reference to the preservation of plate and similar cultures. These cultures (whether plate, box, flask, tube, or the like) can be successfully preserved with a mixture of equal parts of alcohol and glycerine, to which an addition of sublimate solution from 0·1 per cent. to 1 per cent. has been made. The addition of the fluid must be made with care; in the case of the tube cultures, by pouring it down the side of the glass, in the case of the box and plate cultures by pouring from a little height and so on. The preserving fluid must be allowed to act for one or two days. The gelatine, or agar-agar, may afterwards be removed from the plates by inserting a spatula underneath, and may be kept in that form stored without the glass or box. The second suggestion deals with two modifications of Esmarch's so-called 'roll-cultures.' To do away with the necessity of the plug of cotton wool, which is apt to become wetted, Schill proposes as a substitute for the tubes ordinary white glass medicine bottles of 100–200 centimètres capacity, which can be well sterilised before and after their filling with the nutritive gelatine by means of steam. Under these circumstances, as the bottles are placed horizontally, it is not necessary to make use of a cotton-wool plug, since air-germs are unlikely to enter.

To obviate the inequality of the layer of nutritive gelatine in ordinary 'roll-cultures,' it is suggested that two tubes, the inner of so many millimètres less in diameter than the outer, may be employed. The interval between the tubes is then to be filled with the nutritive gelatine. When the gelatine is quite set the inner tube may be loosened by filling it with tepid water, and removing it by taking hold of a cotton-wool plug, which may be inserted in it for the purpose. When the micro-organisms which are being cultivated are anaerobic the inner tube may remain *in situ*.

Instead of plate cultures the author has used for some years flat flasks of colourless glass, with two parallel sides (6 c.m. x 10 c.m. x 1½ c.m.). These are sufficiently filled with nutritive gelatine, sterilised before and after with steam, and placed horizontally. The preservation of the gelatine cultures is not recommended with the fluid before mentioned if there is a liquefaction of the gelatine.

Schill recommends wafers as an excellent nutritive ground, especially for chromogenic bacteria, since the dead white of the wafer affords a good background for the colour. The wafer well soaked with nutritive fluid may be sterilised in a Petri's glass box.

For the examination of tubercular sputum for the tubercle-bacilli, it is as well, our author says, to make object-glass instead of cover-glass preparations. By so doing many parts of the sputum may be examined in one preparation, and one cover-glass only need be used, as, if water is the medium employed, the cover-glass may be pushed along the slide, and the parts of the preparation may be examined in order. In staining, after drying over a flame, as the thicker glass retains the heat longer than the cover-glass, the colouring reagent used need not have been previously warmed.

The growth of moulds may be hindered without hindering the growth of bacteria, by placing in the nutritive gelatine before sterilisation a morsel of camphor.

Vincent D. Harris, M.D.

GENITO-URINARY SURGERY.

RECENT PAPERS.

1674. Guyon.—On the Treatment of Urinary Fistula. (*Annales des Maladies des Organes Génito-Urinaires*, April 1889.)

1675. Segond.—On the Operation for Varicocele. (*Annales des Maladies des Organes Génito-Urinaires*, April 1889.)

1676. Langlebert.—On the Treatment of Epididymitis by the Impermeable Cotton-wool Suspensor. (*Ibid.*, April 1889.)

1677. Newell, Dr. Otis.—On the Diagnosis of Bladder Tumours and Stone by Means of the Cystoscope. (*Boston Med. and Surgical Jour.*, April 1889.)

1678. Anderson.—Two Cases of Renal Exploration for Suspected Calculus, with Subsequent Nephrectomy in One. (*Lancet*, April 20, 1889.)

1679. Watson.—On the Operative Treatment of the Hypertrophied Prostate.

1680. Whitehead.—On the Treatment of Confirmed Catheter Life by a Permanent Perineal Opening. (*Brit. Med. Jour.*, April 13, 1889.)

1681. Lane, Arbuthnot.—On a Case of Hypertrophy of the Prostate for which Prostatectomy was Performed. (*Lancet*, April 27, 1889.)

1682. Terillon.—On Nephrorraphy for Painful Floating Kidney. (*Académie de Médecine*, Feb. 5, 1889.)

1683. Guyon.—On Two Cases of Nephrorraphy. (*Académie de Médecine*, Feb. 19, 1889.)

1684. Thornton, Knowsley.—On Twenty-five Cases of Nephrectomy by Abdominal Section. (*Proceedings of Royal Medico-Chirurgical Society.*)

Art. 1674. *Guyon on the Treatment of Urinary Fistula.*—Professor Guyon contributes the substance of a lecture delivered at Hôpital Necker, and emphasises his views as to the necessity of thoroughly dissecting out the fistula and the pouch which is usually found near the urethra, and which has been the first point of accumulation of urine. When there are one or two perineal fistulæ, but with very little induration in the perineum, he finds that simple dilatation of the urethral stricture is generally sufficient, but where there are many fistulæ together, with thickened sinuses and swelling of the neighbourhood; where, in fact, the tissues around the fistula have, under the influence of the urine, become proliferated, he insists upon the necessity of dissecting out freely. The lecture does not treat of penile fistula, but only those on the perineum and perineo-scrotal areas.

1675. *Segond on the Operation for Varicocele.*—Dr. Segond advocates the treatment of painful varicocele by either simple excision of the overlying skin on one or both sides, when the scrotum is redundant, or by the same operation together with division or excision of the vein in other cases. Dr. Henry, of New York, has written on this method of simple excision of redundant scrotum, which seems to have been originally advocated by Sir Astley Cooper, and Dr. Segond warmly supports this line of treatment. He gives also the experience of Dr. Reclus in favour of this simple excision of the scrotal tissue, and the four cases in his private practice, which have been followed for a reasonable time, are more instructive than ordinary hospital cases.

1676. *Langlebert on the Treatment of Epididymitis.*—Dr. Langlebert claims that his father introduced this plan of treatment which goes by his name, and has met with unqualified success. He maintains that it acts not by compression, but by the heat and moisture and by the free perspiration it induces. The principles aimed at are (1) to obtain heat and moisture, (2) immobility, (3) support, (4) moderate compression. The apparatus consists of a netted bag lined with cotton-wool, which is made impermeable by a coating of caoutchouc. All can be readily changed or renewed, and is said to give immediate relief. [The whole paper is deficient in anything like scientific proof, and, though the plan may be excellent, the paper is too suggestive of being a puff of the Langlebert method.—*Rep.*]

1677. *Newell on the Diagnosis of Bladder Tumours and Stone by Means of the Cystoscope.*—Dr. Newell speaks in strong terms in favour of the cystoscope, and gives illustrations of four cases. The difficulty he first experienced in getting a clear view of the interior of the bladder he finds clears away generally in a day or two, when the bladder can be got into such a condition that it may be examined 'as with the light of day.' He considers that photography is more suitable for normal bladders than for pathological states [but we cannot see why he thinks so, or how photography of the normal anatomy is likely to be a success. He does not refer to Mr. Fenwick's method of modelling, which has been fruitful in that author's hands.—*Rep.*] As regards calculus, he 'does not think anyone who possesses a cystoscope would ever think of searching for stone except by its aid.'

1678. *Anderson on Two Cases of Renal Exploration.*—Mr. William Anderson gives a paper on two important cases of renal exploration. The first was in a young woman of 24, in whom the symptoms of right renal calculus were paroxysmal pain, hæmaturia, and progressive loss of health. The kidney was explored by palpation and acupuncture after exposure, but nothing was discovered, and her progress was good, though there was a short relapse after two weeks. Mr. Anderson remarks that this is one of the many cases already on record in which symptoms closely resembling those of stone have arisen without obvious exciting cause, and have been relieved more or less completely by an operation that has missed its immediate mark. A consideration of its history suggests the possibility of a neuralgic origin, but the associated hæmaturia can less easily be accounted for. While the patient was in hospital it was noticed that the paroxysm was always preceded by a general depression of spirits and by a tendency to neuralgia, and that absolute repose gave little or no relief to the pain, while exertion was only provocative of suffering. She has since become married, and has led a much harder and more active life, but has had no relapse. It is, of course, impossible to assert that no calculus is present, but the thoroughness of the local exploration, the immediate relief to the paroxysms by the operation, and the subsequent disappearance of all indications of the complaint, render it highly probable that the whole condition was due to some complicated form of neurosis. In the second case, that of a young man of 21, there had been intermittent acute pain in the left loin, at first appearing suddenly after rheumatic fever, and there was now progressive weakness but no hæmaturia. The kidney was explored on September 1, 1886, and as nothing abnormal could be detected by inspection or palpation a small incision was made into the parenchyma, and the finger introduced into the pelvis of the kidney, and the calices explored without finding anything abnormal. Two hours later there was considerable hæmorrhage, checked by compresses; and again on the tenth and thirteenth days after the operation. With great care the broken-down clots, which had collected behind the peritoneum, were cleared out and the wound granulated. For about a year he remained quite well; but in December 1887, after a strain, the pain suddenly returned, and he was readmitted, after rigors with high temperature. An aspirating needle found pus, and the cicatrix was freely incised, evacuating a deep collection of inodorous pus. Great relief followed for two months, when a second collection of pus was set free by incision. In June there was escape of urine by the wound; and in September, in consequence of fresh pain and progressive weakness, the kidney was further explored, found greatly dilated, and removed; the pedicle being ligatured *en masse* owing to the matted condition of parts, but it was noticed that tightening of the ligature induced extreme shock, so much so that a subcutaneous injection of ether was necessary before the patient could be moved to bed. Recovery was rapid, and he left hospital on December 1, about three months after operation. Mr. Anderson remarks that the case was obscure. The pain resembled exactly what used to be considered pathognomonic of renal calculus, but none existed. A further and no less perplexing problem is offered by the complete relief afforded for the time by the renal explorations. Surgically, the first fact deserving of notice was the profuse and repeated hæmorrhage following the exploration. The enormous loss of blood proves that the renal substance cannot always be incised with impunity. It is probable that here a large vessel had been punctured but not completely divided, and that the blood escaping for a time in small quantities found its way through the ureter into the bladder; the recurrence may be explained by imperfect healing of the vessel. There is no doubt that the danger of an incision is comparatively slight when the surgeon tears or cuts the kidney substance directly over a stone, as the large vessels are protected by the foreign body. Secondly, it may be noticed that the difficulty is great in finding positive evidence of the collection of pus before the experimental use of the aspirator. Thirdly, the profuse hæmorrhage accompanying the removal of the kidney, in spite of the preliminary ligature of the pedicle. This was no doubt due to the presence of an aberrant vessel at the upper part, for here it was found impossible to detach the capsule. Finally, the case affords throughout a powerful testimony in favour of antiseptics. Save for the precautions that were adopted and persevered in under very adverse circumstances, the patient must have died from septicæmia or exhaustion after the first operation. [These cases seem of considerable importance from their peculiarity. It seems also that the delusive symptoms of calculus may point to an early stage of renal irritation in other diseases besides calculus. And the effect of ligature of the pedicle would appear to indicate here, as in some other cases, the importance of the injury to the nervous supply of this organ.—*Rep.*]

1679. *Watson on the Operative Treatment of the Hypertrophied Prostate.*—Contains some valuable matter for which we may refer to the review contained in this number of the RECORDER.

1680. *Whitehead on the Treatment of Confirmed Catheter Life by a Permanent Perineal Opening.*—At a meeting of the Medical Society of London, on March 4, Mr. Whitehead, of Manchester, read a paper on what he considered a novel treatment, but there is no doubt it has been practised by many surgeons besides himself. Many of his remarks, however, are of special interest at the present time. Among others the following may be quoted: 'Perineal prostatectomy appears to me an operation without any of the advantages of precision. You can neither regulate the amount, nor define the limits, of what you remove, and there is always the possibility that an undue mass may be taken away and permanent incontinence result. McGill's suprapubic prostatectomy has, at least, the merit of affording the operator an opportunity of seeing the overgrowths, which project into the bladder, *in situ*, but it affords no facilities for the removal of those growths which are confined to other portions of the prostate. The results of the cases reported by Mr. McGill were most excellent, but the number was small, and the conditions under which they were operated upon were exceptional. The mortality of suprapubic cystotomy in men over 50, it must be remembered, amounts to over 33 per cent., and this mortality is not likely, in the long run, to be lessened by the additional risk which must necessarily attend prostatectomy. About six years ago I was more than ever impressed with the desirability of avoiding the pain and inconvenience which attend the constant passage of catheters; and I also became more familiar about this time with the facility with which a bladder could be entered for the purpose of digital exploration, and the idea occurred to me that at least three most important desiderata might be attained by a perineal urethrotomy. The bladder could be drained, it could be given necessary rest, and a considerable length of urethra would be relieved from the irritation of repeated catheterism. In consequence of the relapses which almost invariably followed the closure of the perineal wound and the re-establishment of the *status quo*, I further decided to maintain permanently the direct passage through the perineum. In the conception of this operation advantage was taken of the fact, which had been generally overlooked, that an opening in the membranous urethra does not involve, as many suppose, incontinence of urine. I am aware that there are numerous instances on record where, after perineal cystotomy, the wounds have failed to heal, and a permanent fistula has remained; but in these cases the fistulæ have been accidental, and never, to my knowledge, have they been claimed as the result of a deliberate intention on the part of the operator. And, further, a perineal fistula in itself would afford no advantage; but if the fistula is made, and utilised in the manner I have to propose, then it becomes the key to the difficulty which attends the treatment of prostatic enlargement. I will now proceed, in the first place, to describe to you the operation itself, which differs in no essential detail from an ordinary median urethrotomy. A staff is passed into a previously moderately distended bladder. A lithotomy-knife, with the edge upwards, is plunged directly into the groove of the staff from a point an inch above the anus to a point a little in front of the prostatic apex. I prefer to enlarge the skin incision as I withdraw the knife, leaving the external wound, when finished, about an inch in length, and directed from the raphé towards the centre of the space between the anus and the left tuber ischii. As the staff is withdrawn the finger is passed into the bladder when possible, and the opportunity is taken of making a digital exploration. When nothing is discovered admitting of immediate operation, the tube I have been at some pains in getting made to my satisfaction is introduced and maintained by a T-bandage, which I have found quite as effectual and much more comfortable to the patient than tapes. My preference for enlarging the external wound by one sweep of the knife during its withdrawal, in the place of cutting down on the staff by repeated incisions, is to secure a clean section and thus avoid an irregular wound, which gives greater facilities for the lodgment of discharges. The limited space between the point where the knife first enters the urethra and the rectum does not afford sufficient room for a wound which has to remain permanently open unless the incision be made obliquely as described.' He does not believe much in the local use of germicide drugs, but what is wanted is something to scour from the bladder every drop of irritating matter, and he uses full injections of water, the temperature of which is increased up to 120° F. Of the few drugs of undoubted benefit in cystitis, he speaks warmly of the oxymuriate of bismuth; a drachm to four ounces of hot water, and the weight of the powder causes much to be precipitated on the mucous membrane and the prostate. He continues:—'In conclusion, I wish to emphasise the chief features of this treatment. First, that the operation is undertaken with the design to establish and permanently maintain a fistula in the closest possible proximity to the bladder, but in front of the prostate. Secondly, that the fistula can be utilised at pleasure for the dual purpose of removing the contents of the bladder, and of minimising the inconveniences attending regular, systematic, and thorough irrigation. I am under the impression that the cases I have cited are the first on record where the bladder has been approached through the perinæum with the deliberate intention of keeping the opening permanent for the purpose of relieving the pain and misery of an enlarged prostate.'

In the discussion which followed, the President, Sir William MacCormac, thanking the author for his paper on an interesting and difficult subject, asked him whether patients so treated were not liable to attacks of difficulty of urination in consequence of obstruction by the middle lobe of the prostate, as appeared to him to be the case. He asked him whether he had met with any cases operated on after the method of Dr. Hunter Maguire, of South Carolina, who had mentioned a number of cases at the Congress of American Surgeons, in which all the objects which could possibly be obtained by bladder drainage had been obtained. Dr. Maguire's operation was directed to the opposite end of the bladder, and he leaves a sloping canal, the external orifice of which reached the abdominal wall at a point some distance above the highest level reached by the full bladder, in such wise that under ordinary circumstances no leakage of urine took place. Mr. Buckston Browne criticised the results narrated in Mr. Whitehead's paper. He said the 'button-hole' operation on the perineum was as old as the hills, and its application to the digital exploration of the bladder was brought before the profession long ago by Sir Henry Thompson. He questioned the assertion that the occurrence of a permanent fistula, unless expressly provided for, was seldom or never met with. His own experience had led him to quite an opposite conclusion. He also questioned the assertion that the operation *per se* was not attended with danger. He had seen very alarming hæmorrhage occur in the course of the operation. He said that such fistulæ were often exceedingly difficult to get to heal, and the result was then very distressing. He urged that all the good effects could be obtained from the suprapubic operation, which, moreover, permitted of a much more thorough exploration of the condition of the bladder. Mr. Bernard Pitts observed that the cases alluded to were so disappointing that all suggestions as to treatment were welcome. His personal experience of operations of the kind was limited, but he did not think the disasters alluded to by previous speakers were to be apprehended if the incision were kept in the middle line. Mr. Whitehead, in reply, said that the behaviour of the prostate was often very mysterious. The symptoms of enlarged prostate were sometimes present when the organ was not enlarged in the slightest degree, and he knew of instances in which the bladder had been opened under the impression that there was some tumour of the prostate, when nothing of the kind turned out to be present. He thought that a comparison between the suprapubic operation and urethrotomy was decidedly in favour of the perineal operation. He mentioned that he had operated upon some two or three hundred cases within the last twenty-five years, and he had in only one case observed a permanent fistula.

1681. *Lane on a Case of Hypertrophy of the Prostate for which Prostatectomy was Performed.*—Mr. Lane relates a case of prostatectomy by the suprapubic operation, and, as this mode of treatment is still on its trial, the careful record of such cases is of importance in enabling surgeons to form a correct judgment of its value. A man, aged 72, came under treatment on account of increasing difficulty in passing water, and with chronic bronchitis of several years' standing. The prostate was much enlarged, as found by a rectal examination, and the urine contained some blood, and he was very weak. After a week's treatment there was a large increase in the amount of blood passed, and, on March 10, suprapubic cystotomy was performed, and a large firm globular mass, as large as a Tangerine orange, found projecting upwards from the base of the bladder. This was removed by means of an écraseur without any material bleeding. Drainage was maintained by means of a soft catheter passing through the abdominal wound. He steadily improved until eight days after operation, when he suddenly died from the accumulation of obstructive mucus in the bronchial tubes. Mr. Lane remarks that the case was of interest from three points of view—the sudden onset of the subjective symptoms of obstruction, the excessive amount of hæmorrhage, and the large size of the growth. The suddenness of the obstruction he thinks due to the temporary congestion of a very vascular structure, and the hæmorrhage to the same cause. He also points out that the keeping a patient in the recumbent position after operation must be detrimental to his chances of recovery from severe chronic bronchitis.

1682. *Terillon on Nephrorraphy for Painful Floating Kidney.*—Dr. Terillon narrates a case of painful floating kidney in a woman aged 42, who had been laid up in bed for six months. Nephrorraphy in the left lumbar region was performed, Dec. 29, 1888, and she recovered rapidly without any reappearance of the pain. The kidney was considerably enlarged, besides being very movable. At the operation Dr. Terillon included in the sutures not only the fat but the capsule itself and the superficial portion of the parenchyma. This plan he thinks due to M. Duret, and fixes the kidney very thoroughly, without any danger from hæmorrhage.

1683. *Guyon on Two Cases of Nephrorraphy.*—M. Guyon thinks that any operation for fixing a floating kidney is seldom required, but when constant pain makes life a burden, he does not hesitate to perform the operation of nephrorraphy. He always adopts the plan of suturing through the substance of the kidney, and he attaches it to the posterior wall of the incision and employs absorbable sutures. He apparently prefers the lumbar incision, but this is not clearly stated. In both the cases reported the results were excellent, and the patients were relieved of the pain which had become unbearable.

1684. *Thornton on Twenty-five Cases of Nephrectomy by Abdominal Section.*—At a meeting of the Medico-Chirurgical Society on April 9, Mr. Knowsley Thornton read a paper, and accompanied it with a complete table of twenty-five cases, showing age, sex, condition, disease, date of operation, situation of incision, method of treating ureter, whether drained or not, immediate result and subsequent history to date. Eight of the cases had already been brought before the International Medical Congress in Copenhagen, and these were marked off from the seventeen unpublished cases in the table, and but briefly, if at all, referred to in the context. Of one of them, No. 6, which was reported a failure in 1884, with pain in the bladder and the other kidney, a very satisfactory subsequent history was now given, the patient being in perfect health, married, and mother of a son. There were twenty recoveries and five deaths in the series, a result 20 per cent. better than that generally given for all nephrectomies, including those by lumbar section. This result was compared with that in ovariotomy eleven years ago, the mortality being then much higher for this comparatively simple operation. Two of the fatal cases were pointed to as not properly to be counted against abdominal nephrectomy, one being a malignant tumour which had perforated the right pleura, and the other having died of hemiplegia, which was brought on by the anæsthesia rather than by the operation. All the features of special interest in both the successful and fatal cases were touched upon. The superiority of nephrectomy over nephrotomy and drainage for the cure of hydronephrosis was illustrated by six cases. Incision of suppurating kidney as a preliminary to nephrectomy was condemned. The author's practice of pinning out the ureter had led to no troubles, and was claimed as the chief factor in success. The removal of suppurating kidneys without any puncture during operation was strongly advocated whenever their size admitted it. The superiority of Langenbuch's incision was insisted upon. The question of drainage was fully discussed, and that of the differential diagnosis in sarcoma of the capsule and of the kidney touched upon. A question was raised as to the varieties of tubercular (so-called scrofulous) kidney; and the paper concluded with a promise of records of lumbar and abdominal nephrotomies and nephrolithotomies, in which the mortality was considerably lower than in nephrectomy. Either figures or actual specimens were shown of many of the cases. Mr. Clement Lucas claimed that the lumbar operation was more successful than the anterior method. He had operated on six cases without a death, and considered this success due to careful selection of the cases. He insisted on the importance of knowing the working power of the other kidney; the quantity of urea excreted daily should be estimated, and if it were less than half the normal amount then the operation must be a very serious one. His cases included hydronephrosis,'pyonephrosis, and calculous pyelitis; but he had not operated for malignant disease of the kidney. Twice he had explored the loin, but finding the lumbar glands involved he had abandoned the operation. Czerny taught that hydronephrosis was best dealt with by laying open the cyst, and stitching the wall to the skin: this was absolutely wrong. The cyst should be removed, for in hydronephrosis it was generally possible to estimate the condition of the other kidney. He questioned whether suppurating kidneys could be removed through the peritoneum with perfect safety, owing to the danger of fouling the serous membrane. The ureter had never given him any trouble, he simply ligatured it and dropped it back. Mr. Thornton said that he did not hope to convert Mr. Lucas to the anterior operation, though he congratulated him on his successful cases. It must be remembered that when a large number of cases were dealt with then the mortality came in. In his first eleven cases all recovered, but in the next fourteen he lost five cases, giving a mortality in the twenty-five of 20 per cent. He agreed that it was important to estimate the condition of the other kidney, but thought that a little risk might be run even if it were not quite sound, because the labour thrown upon it by a fellow-suppurating kidney would be greater than that thrown upon it by the operation. He had not met with any difficulty in preventing septic injection of the peritoneum. He defended his mode of dealing with the ureter.

W. W. WAGSTAFFE.

IN the Bombay Presidency no fewer than 1,168 human beings were destroyed by snakes during 1887, and over 300,000 venomous snakes were destroyed.

MEDICINE.

RECENT PAPERS.

1685. ROLLESTON, H. D.—The Causation of Mitral Diastolic Murmurs. (*St. Bartholomew's Hospital Reports*, vol. xxiv.)

1686. MCCALL ANDERSON, PROF.—On Maloja as a Health-resort for Consumptives and Others. (*Glasgow Med. Jour.*, April 1889.)

1687. HEITLER.—On the Diagnosis of Miliary Tuberculosis in Cases of Emphysema with Remarks on Emphysema. (*Wien. med. Wochensch.*, Nos. 4 and 5, 1889.)

1688. WILD.—On an Unusual Case of Angina Pectoris. (*Med. Chron.*, May 1889.)

1689. RANSOME.—On Ozone in the Treatment of Phthisis. (*Med. Chron.*, May 1889.)

1690. MAYS.—On Alcoholism and Phthisis. (*Quarterly Jour. of Inebriety*, April 1889.)

ART. 1685. *Rolleston on the Causation of Mitral Diastolic Murmurs.*—Mr. Humphry D. Rolleston, M.B., discusses in this paper the various views that have been held with regard to the production of mitral diastolic murmurs, and points out the weak points in the chain of assumptions upon which the respective theories are made to hang. Regarding a complete diastolic murmur as made up of three parts, he seeks to give a new explanation of the early and mid-diastolic sounds which constitute its first two-thirds. He submits that while the presystolic or third part of the whole murmur is due to the *vis a tergo* of the auricular systole, the early and mid-diastolic murmurs result from the *vis a fronte* of the expanding left ventricle, and its 'suction-pump' action, so-called. No objection can be raised to this additional speculation on a point on which the best authorities differ. It must stand or fall by the light of further research. Possibly it might conduce to a wider study of the subject if it were more fully recognised that the physical signs of mitral constriction are at times to be met with under other conditions, and especially in association with great dilatation of the mitral valve.

1686. *McCall Anderson on Maloja as a Health-resort for Consumptives and Others.*—Professor McCall Anderson, in a lecture delivered before the Medico-Chirurgical Society in March, 1889, speaks highly of the Maloja and its new Hotel Kursaal as a winter residence for consumptives, and also for any other persons who may have 'run down' in consequence of hard professional work or study. He quotes a significant observation of Dr. Henry Bennet, to the effect that with increased popularity, some of the hotels in the Engadine have become unfit places for consumptives, as an argument in favour of a new departure in health-resorts. The Hotel Kursaal at the Maloja he describes as one of the finest and most comfortable in Europe, and the terms in which he refers to its various attractions are somewhat in excess of those which have been employed by recent writers on the subject. The Basle and Coire route is advised as the best, the Julier Pass being crossed by carriage, or a halt being made at Mühlen or Tiefenkasten for a night *en route*. The class of case which does best at Maloja is the uncomplicated chronic phthisis with a limited area of disease. The dyspepsia of phthisis in this stage is apt to improve greatly, and the powers of digestion are often wonderfully strengthened after a short stay at the high altitude. At the end of the season the advice of Dr. Tucker Wise of Maloja may be followed, who counsels a short stay at Wiesen towards the end of March, before the descent to the plains again. There is at present no overcrowding at Maloja. Only one hotel is open during the winter, and there are no shops or lodging-houses. Hence there is nothing to mar the purity of the atmosphere, while the quiet and repose is of the greatest service to some types of consumptives. Winds are more prevalent at Maloja than at Davos, but the temperature is nevertheless very equable and there is abundance of sunshine. Dr. Anderson warmly commends the place as a recruiting ground for overworked medical men with 'jaded brains,' and closes his paper with a strong comment upon the inconsistency of crowding cases of chronic phthisis together in the wards of a so-called consumption hospital, which, as he rightly observes, is the 'worst place that could be selected for them.' All physicians who are familiar with the working of chest hospitals would join with him in welcoming 'the accumulation of a large fund for the benefit of such patients—not to be expended in stone and lime, but in sending them to regions where they have a fair chance of recovering their health, and of again becoming useful members of society.'

1687. *Heitler on Diagnosis of Acute Tuberculosis with Emphysema and Remarks on Emphysema.*—Dr. M. Heitler calls attention to several points in connection with emphysema, reserving that term for such cases only as have actually undergone rupture of the vesicular walls, and excluding all those in which overstretching has taken place without coalescence. He refers at some length to the controversy on the true pathology of emphysema, and expresses belief that a preliminary degeneration of the vesicular walls is a regular precursor of the condition, and points to many cases in support of his views, in which an undoubted emphysema has little by little been brought about without the presence of any of the usual mechanical causes. He observes that if mechanical agencies were alone to blame, emphysema would be much more common than it is. The loss of the upper border of liver dulness may give rise to error as to its enlargement, but Dr. Heitler believes that any considerable extent of dulness below the margin of the ribs indicates in most cases an actual congestive enlargement. Displacement of the liver downwards may sometimes occur rather suddenly, and may so exercise traction upon the diaphragm and the lung above it as to lead to a diagnosis of emphysema. The cardiac complications of emphysema are, as a rule, difficult to define, but in many cases the physical signs, and even symptoms, of mitral disease may be caused by changes on the right side of the heart. Diastolic murmurs without valvular change have frequently been noted. When acute tuberculosis attacks an emphysematous lung, which is a very rare occurrence, the diagnosis mainly rests upon the course of the temperature, and the onset of dyspnœa and other evidences of a grave affection of the lung, without any physical signs to account for it. Where the tubercle supervenes upon acute bronchial catarrh or capillary bronchitis the diagnosis is almost impossible.

1688. *Wild on an Unusual Case of Angina Pectoris.*—Dr. R. B. Wild (Manchester) records a case of Angina Pectoris in a young woman, aged 21, who had been perfectly free from symptoms till within two years of her death. Occasional attacks of pain gradually increasing in frequency and severity, especially after any exertion or emotion, were the only indications of illness. No signs of organic mischief could be discovered. Death took place after a hearty breakfast, during a catamenial period. *Post mortem* examination showed that the heart was enlarged, but not excessively; there was no dilatation and no valvular lesion. The internal coat of the aorta round the coronary arteries was opaque, thickened and raised, the orifice of the coronary arteries being very small, barely admitting a small probe. The microscopic examination showed that fibrous changes had taken place in the intima, leading to periarteritis of the small vessels in the fibrous tissue, and obstruction, partial or complete, of their lumen. The cardiac muscle showed increase in the amount of connective tissue between the muscle fibres, infiltration of leucocytes amongst the fibres themselves, and endarteritis of the small vessels running between them. A history of possible congenital syphilis was obtained in this case, and Dr. Wild suggests that the changes observed might possibly be due to its influence. Congenital syphilis has been proved to attack one organ or one structure only, especially in the case of cerebral arteries, the testicle, &c. All the conditions which have been supposed to contribute to the production of the intense pain of angina pectoris were present in the case, and the cause of death was syncope.

1689. *Ransome on Further Observations on the Use of Ozone in the Treatment of Phthisis.*—Dr. Arthur Ransome records a further series of cases of phthisis in all stages, in the treatment of which he has used inhalations of ozone by the method already described by him (*Med. Chron.*, April 1888). The ozone is inhaled from cylinders, each cylinder representing 7 litres of pure oxygen, ozonised up to about 9 per cent., and under a total pressure on the cylinder of 6-8 kilogrammes. Thirteen cases are given. All were treated with iodoform in pills and cod-liver oil in addition to the inhalations. In all stages of the disease the most notable improvement consisted in the steady gain of weight. In the detailed account of the cases there is no mention of the course of the temperature, but in the author's summary at the end of his article he speaks of continuous freedom from fever, absence of night-sweats and general improvement. No very marked change could be traced in the ordinary course of the physical signs, nor did the results of examination of sputa give any important indication, but Dr. Ransome expresses doubt as to whether any series of cases treated by the ordinary methods would present such good or such lasting results as those treated by ozone inhalation. From one to four cylinders were inhaled three times a day, and the treatment was well borne by the majority of patients, being obviously popular with many of them.

E. Clifford Beale, M.B.

1690. *Mays on Alcoholism and Phthisis.*—Professor T. J. Mays calls attention in the *Quarterly Jour. of Inebriety*, April 1889, to the frequent occurrence of phthisis in families addicted to alcoholic excess. He gives the family history of a number of inebriates, of which the following is a type. C. H., an army officer, a periodic inebriate with an outbreak every three months. His mother died of consumption two months after his birth, and his two sisters died from the same disease. His father's family is temperate, but several members have died from consumption. His maternal grandfather drank to excess at times. Mays broaches the theory that these diseases (alcoholism and phthisis) are convertible, and that the explanation of this relation is to be found in a common nervous origin. He regards pulmonary phthisis as principally nervous in character. On the other hand, the power of alcohol to produce nerve degeneration is well known. Alcoholic degeneration of the pneumogastric nerve is followed by disease of the lungs, heart, and other organs, and alcohol can produce phthisis *de novo*, either directly or through hereditary influence. Cases are adduced possessing the various lesions involved in this alcoholism and phthisis relationship, viz.—the co-existence of pulmonary disintegration, alcoholism, and nerve degeneration, well brought out by *post mortem* demonstration. NORMAN KERR, M.D.

THERAPEUTICS.

RECENT PAPERS.

1691. HUCHARD, M. HENRI.—On Calomel as a Diuretic. (*Rev. Gén. de Clin. et de Thérap.*, April 25, 1889.)

1692. Cocaine. (*Journal of the British Dental Association*, April 15, 1889.)

1693. COMBY, DR.—On Caffeine in Acute Pleurisy. (*Rev. Gén. de Clin. et de Thérap.*, April 25, 1889.)

1694. MARGIGNEY AND BOYMOND, DRS.—On the Treatment of Biliary Lithiasis by Large Doses of Olive-oil. (*Rev. Gén. de Clin. et de Thérap.*, March 14, 1889.)

1695. GRANDCLÉMENT, DR.—On the Indications for, and Dangers of Antipyrine. (*Lyon Médical*, March 17, 1889.)

1696. GAREL, DR. X. L.—On a Case of Spasmodic Cough cured by Chloride of Methyl Spray. (*La Clinique*, April 18, 1889.)

1697. VIGIER, DR.—On the Treatment of Chronic Coryza. (*Rev. de Thérap.*, April 15, 1889.)

1698. VERHOOGEN, M. RÉNÉ.—On Sulphonal. (*La Clinique*, April 11, 1889.)

1699. BOUVARD, DR.—On Sulphur in the Treatment of Sciatica. (*Rev. de Thérap.*, April 15, 1889.)

1700. MORISON.—On Somnolence with Cyanosis Cured by Massage. (*Practitioner*, April 1889, p. 277.)

1701. ECCLES.—The Treatment of Habitual Constipation by Massage. (*Practitioner*, April 1889, p. 260.)

1702. Sulphonal.

1703. ROBLEDO.—Inhalation of Oxygen. (*Rev. de Med. y Cirurgia Practicas*, March 22, 1889.)

ART. 1691. *Huchard on Calomel as a Diuretic.*—The drug was recommended as a diuretic by Graves, then by Stokes, and was then forgotten until in 1886 it was once more brought into evidence by Jendrassik. M. Huchard tried it in five cases of cardiac œdema, and dropsy. Diuresis was only produced in two cases, and he found that the increased diuresis never lasted more than three days, when the secretion returned to its original amount. In the three other cases the only effect observed was profuse salivation. Under any circumstances this method of treatment has the disadvantage of producing salivation and diarrhœa. The first should be avoided by giving chlorate of potash, and the second prevented by adding opium. It probably acts (when it does act!) by lowering the blood pressure, allowing the heart a freer action. It is useless in cardiac disease complicated with cirrhosis of the liver, and it is positively hurtful in renal disease or heart disease associated with albuminuria. The dose is 4 grains four times a day for two days.

1692. *Cocaine.*—In a leading article on the use of cocaine in dentistry, our contemporary insists upon the advantage, in certain cases, of local over general anæsthesia. While admitted to be invaluable when applied to exposed nerves or sensitive dentine, to lessen the discomfort attending the use of clamps, or to neutralise the irritability of sensitive mouths during the operation of taking a model, it is affirmed to be of very little use when applied to the gums for extractions. It is now universally recognised that to be of any use in alleviating the pain of an extraction the cocaine must be injected. For this purpose half a grain may be regarded as sufficient, and three-quarters of a grain should not be exceeded, at any rate, when used for the first time. The important point is to see that the injection does not regurgitate through the puncture. The desirability of ascertaining beforehand if possible the functional condition of the kidneys is also insisted upon.

1693. *Comby on Caffeine in Acute Pleurisy.*—The efficacy of caffeine in serous effusions of cardiac origin, now universally recognised, led MM. Huchard and Jaccoud to try this drug in sero-fibrinous pleurisies. More recently M. Comby prescribed it in a case of right acute pleurisy. He placed the patient on a milk diet, and ordered him to be given twenty-five grains of caffeine and the same quantity of benzoate of soda in the twenty-four hours. The excretion of urine increased from 600 to 2,000 grammes in the twenty-four hours, and the signs of effusion rapidly disappeared. He points out that caffeine is usually well borne, at any rate when the kidneys are sound.

1694. *Margigney and Boymond on the Treatment of Biliary Lithiasis by Large Doses of Olive-oil.*—This method was first suggested by Dr. Tonâtre, of New Orleans, in 1887, and was put to a practical test at Paris by Chauffard, whose earlier trials proved singularly successful. A careful examination of the concretions expelled, led, however, to the belief that they were not biliary calculi at all, but were due to decomposition of the oil into glycerine and a fatty acid, under the influence of the pancreatic juice. Last year it was tried on a man who suffered from biliary lithiasis of many years' standing. The gall-bladder could be felt, distended with calculi, and the size of a hen's egg. He had three attacks of colic in 1888, and soon after, he was put on the treatment. He was given two tumblersful of olive-oil, with half an hour's interval. Some hours later he was violently purged, and numerous concretions came away in the stools, which the patient joyfully collected, thinking he was rid of his tormentors. His exhilaration was of short duration, for their analysis demonstrated clearly the intestinal origin of the concretions. The conclusion to be drawn from these data is that the olive-oil treatment is without any effect on the expulsion of biliary calculi.

1695. *Grandclément on the Indications for, and Dangers of Antipyrine.*—A patient, 65 years of age, suffering from double chronic glaucoma, complained of severe attacks of headache, lasting from 24 to 36 hours and recurring every four or five weeks. He had been ordered to take 10 grains of antipyrine, on the advent of an attack, to be repeated if necessary. For eight months he followed this treatment with great benefit and without the supervention of any inconvenient symptoms. During the last four months, however, each ingestion of the drug was followed by the appearance of ecchymoses, the size of a sixpenny piece on the back of the hands, on the face, and around the anus. These patches faded away and disappeared in about a week or ten days. They were not accompanied by any constitutional symptoms or gastric derangement. The antipyrine was the same as before, so that the effects then caused would not be attributed to any imperfection in the drug itself. The author recalls the fact that the same sort of thing occurred some years since in a patient who was taking iodide of potassium, the ecchymoses disappearing when the drug was discontinued. He mentions that one of his *confrères* in the same town has observed eruptions following the administration of antipyrine. In one case the eruption was like that of measles, and in the other, scarlatiniform. In one patient, a girl, antipyrine gave rise to most distressing vesical tenesmus. During the past year the author has given upwards of 3,000 injections of antipyrine in 5-grain doses, and has never witnessed either abscess or eruption of any sort.

1696. *Garel on a Case of Spasmodic Cough cured by Chloride of Methyl Spray.*—The patient was a girl, 13 years of age, who had been suffering for two months previously from a choreic cough which scarcely ever left her. Almost incessantly, the child was seized with spasmodic attacks of coughing, very exhausting and very noisy, presenting many points of resemblance with whooping-cough. With the laryngoscope, nothing beyond a slight hyperæmia of the cords could be seen. As cocaine did not seem to afford any relief, Dr. Garel had recourse to a spray of chloride of methyl which had given good results in his hands in cases of general chorea. The spray was directed on to the back and front of the neck, and a cure followed within a fortnight.

1697. *Vigier on the Treatment of Chronic Coryza.* M. Vigier recommends the following preparations: Tincture of pulsatilla, prepared with equal parts of the fresh plant and alcohol at 90°, given in doses of from ʒjss. to ʒiij., daily in water. As a snuff, he uses one part of anemonine in nine of sugar, and this active principle may also be given in the form of a pill: ℞ anemonine ⅛ gr., pulv. glycyrrhizæ ⅓ gr., syrup q.s. for one pill. Two to four daily. As the anemone loses its properties on desiccation, preparations should always be made with the fresh plant, and, when given internally, it is best supported in a syrup of orange flowers.

1698. *Verhoogen on Sulphonal.*—The author insists on the excellent results obtained with sulphonal in the treatment of certain cases of insomnia in which opiates were formally contra-indicated. In doses of fifteen grains, administered *per rectum*, sleep invariably supervened within twenty minutes, and lasted six hours or thereabouts. The patients complained of no disagreeable after-effects, and improved in condition. Occasionally it was found necessary to repeat the dose during the night. He mentions the case of a patient who was given the drug in this way for six weeks consecutively. The injection was usually given at 9.30 P.M. On several occasions she fell asleep before the time arrived for the injection, and this was consequently dispensed with, but it was always easy to see from her fatigued and comfortless face in the morning that the same amount of repose had not been experienced as with the drug. He asserts that no contra-indication exists to the use of sulphonal. Cardiac and arthritic cases, renal and dyspeptic cases, are all amenable to its influence under all circumstances, and neither intolerance nor tolerance are to be apprehended. The usual dose is a gramme (15½ grains), and this always proved sufficient to induce sleep. It is not easily taken by the mouth on account of its relative insolubility, and it is best given suspended in tepid water *per rectum*, though it is rarely possible to secure that all the drug shall find its way into the gut. Some difference has been noted in the effects obtained from the drug, which, it is suggested, may be due to variations in the quality.

1699. *Bouvard on Sulphur in the Treatment of Sciatica.*—The author, himself a sufferer from obstinate sciatica *a frigore* since six months, narrates the results obtained in his person by the method brought to the notice of the Académie des Sciences by Dr. Cowded. It consists in enveloping the affected limb in a thick layer of flowers of sulphur. The morning following his first application he remarked a distinct increase in the pain, and consequent functional impotence of the limb; but three days later, not daunted by his experience, he tried it again. This time his courage was rewarded by marked relief, and a week later all that remained of the sciatica was a slight 'sleepiness' of the limb. This, however, disappeared entirely after a third application. The local irritation caused by the sulphur was practically *nil*, but he remarked a very powerful and disagreeable odour of sulphuretted hydrogen from the skin and urine. Ten days after the cure of the sciatica an acneiform eruption made its appearance on the forehead and temples, and in three days the whole face was covered, and the skin over the body itched and smarted. This symptom, however, had completely disappeared at the end of eight days. He then made another application of sulphur, in order to test its relationship with the eruption, and, surely enough, the eruption reappeared at the end of a week; and, though less severe, was longer in subsiding.

ALFRED S. GUBB.

1700. *Morison on Somnolence with Cyanosis Cured by Massage.*—In the *Practitioner*, April 1889, p. 277, Dr. Morison relates the following peculiar case. S. G., aged 43 years, tall, stout, the father of a healthy family, who in early life had travelled in South America, where he had fever, and somewhat later contracted syphilis, suffered, for at least fifteen years, from drowsiness, and during the last two years became deeply somnolent. He would fall asleep while playing at cards quite suddenly, beginning to snore, and his face becoming darkly congorged until roused by his companions. For two years he was under the author's care, during which time he was treated by antisyphilitics, antilithatics, dieting, and exercise, but with no result. In November 1888 the author decided to place the patient under a course of massage. He soon showed marked signs of improvement, and in about a fortnight the somnolence had almost entirely disappeared. He continued the massage for about two months, when he reported himself as quite well, though he sometimes had attacks of drowsiness if he indulged in prohibited articles of diet. In this case, cardiac and general tonics, evacuants, and a rected dietary had very little influence. Probably he been able to take sufficient exercise there uld have been no necessity for massage.

1701. *Eccles on the Treatment of Habitual Con- tipation by Massage.*—In the *Practitioner*, April 889, p. 260, Mr. Eccles, M.B., contributes an nteresting article of the different methods of treat- nent by massage. The majority of successful cases ll under one or other of the following groups. The rst consists of persons of both sexes suffering from hronic neurasthenia, in whom there appears to be nquestionable malnutrition of the nervous system. n these cases active and energetic treatment is equired for from six to ten weeks, and consists in— , keeping the patient at rest in bed for not less than nree weeks ; *b*, employing general massage once or vice daily, and abdominal massage three or four mes daily during this period ; *c*, 'overfeeding,' specially increasing the quantity of warm fluids aken ; *d*, substituting for massage gradually towards e end of the course active exercises, and espe- ally abdominal gymnastics. In all cases of neur- sthenia,' whether associated or not with constipa- on, where there has been much emotionalism, it is etter to seclude the patients from members of their mily, but not always from the visits of cheerful nd discreet friends. Another larger class of cases, here the relief of the bowels is rarely, if ever, btained without the abuse of purgatives, is met ith for the most part among middle-aged men hose duties are of a sedentary character, their nly exercise being the walk to and from the railway ation to their business. They hurry over break- st and neglect to relieve the bowels before they art off, and thus develop into a state of chronic nstipation and partial paralysis of the intestinal act. These cases are benefited by abdominal assage, followed by exercises devised to improve e tone of the abdominal walls. There are other ses, where dyspnœa, palpitation, and a slight dema of the extremities point to serious inter- rence with the circulation, and the loss of appetite, rred tongue, flatulence, and acidity show that imary digestion is also faulty. In such cases eatment should be commenced by giving the tient a few days' rest in bed, with frequent and gorous manipulation. In slighter cases abdo- inal massage once or twice a day is sufficient, rying in duration from ten to thirty minutes for out ten days, and afterwards alternated with dominal exercises, will produce a complete cure a few weeks.

1702. *Sulphonal.*—In the *Therapeutic Gazette*, De- mber 1888, p. 830, an article states that the use of lphonal is becoming very general. Dr. Schwalbe ied the drug in fifty cases of the most varied ections ; in 66 per cent. of these, sleep was pro- ced within three hours. In the nervous cases per cent. were successfully relieved. In doses of teen to thirty grains it is a good hypnotic in cases nervous insomnia. M. Matthes has also tried lphonal with success, and believes it will soon nk highly as a hypnotic, but he thinks it should given quite one hour before it is desired that ep should be produced. In doses of sixty to venty grains no effect was produced on the pulse rves. It should be given with great care in all brile affections and where the heart is weak. hildren are well adapted for its use, as it does not roduce any unpleasant symptom.

RICHARD NEALE, M.D.

1703. *Robledo on Inhalation of Oxygen.*—1. Oxygen is best obtained for medical purposes by the decomposition of chlorate of potash by heat. 2. It is administered in inhalations in the dose of 20 to 30 litres daily, half in the morning and half in the evening. 3. From its action in health it is to be considered as a stimulant and tonic. 4. It is very useful in the obstinate vomiting of pregnancy and in atonic dyspepsia. 5. It is efficacious in asthma depending on bronchial catarrh or pulmonary emphysema ; in other pulmonary affections its efficacy is more doubtful ; in tuberculosis its administration is not unattended with danger, and in asphyxia its employment is difficult. 6. In albuminuria and saccharine diabetes oxygen is to be considered as an auxiliary to general medication rather than as the sole treatment. 7. The true indication for inhalations of oxygen is to be found in processes characterised by deficiency in some of the principles of the blood, as in anæmia and chlorosis ; in these affections it is to be considered as the best method of treatment.

G. D'ARCY ADAMS, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1704. CORNEY.—On Citrate of Caffeine in Eclampsia. (*Practitioner*, February 1889, p. 110.)

1705. LIEBMAN, DR. C. (Trieste).—A Case of Myocarcinoma of the Uterus. (*Centralbl. für Gynäk.*, No. 17, 1889.)

1706. DIAMANT, DR. (Vienna).—Precocious Menstruation. (*Internat. klin. Rundschau*, 1888, No. 40. *Centralbl. f. Gynäk.*, No. 16, 1889.)

1707. TRÉLAT, DR.—On the Treatment of Retro-Deviations of the Uterus. (*Rev. Gén. de Clin. et de Thérap.*, April 4, 1889.)

1708. LE BEC, DR.—On a Case of Soft Fibroid removed by Supra-vaginal Hysterectomy. (*Rev. Gén. de Clin. et de Thérap.*, April 4, 1889.)

1709. PHILBERT, DR. E.—Wasting as Affecting Sterility. (*Rev. Gén. de Clin. et de Thérap.*, April 4, 1889.)

1710. LUTAUD, DR.—On the Influence of Morphine on the Uterine Apparatus. (*Rev Gén. de Clin. et de Thérap.*, May 2, 1889.)

ART. 1704. *Corney on Citrate of Caffeine in Eclampsia.*—In the *Practitioner*, February 1889, p. 110, Mr. Corney contributes an interesting article on the use of caffeine in eclampsia. The author divides cases of puerperal eclampsia into two kinds—those due to the retention in the blood of excretory matters through defective action of the kidneys, and those which appear to rise independently of such a cause. It is to the latter class of cases that the following remarks apply. In this class there seems to be no interference with the function of the kidneys, and no signs of toxæmia ; but on the other hand there is a history of nervous irritability, peculiarities of temper, vertigo, headache, neuralgia, and other signs of a neurotic tendency. The following case is cited by the author. A married lady, age 23 years, was confined on Aug. 21 at 7 A.M. ; everything went well until 11 P.M. of the same day, when she became violently convulsed. There was no œdema, and no albumen in the urine ; but for three days and nights the patient remained in a deep stupor. The temperature kept as near as possible at 101°·5 F., but the pulse fluctuated between 80 and 132, and there were periods of cyanosis. Nourishment was taken fairly well all the time, but on the 23rd the patient was in such a critical state that the author decided to try the effect of caffeine. He immediately injected 3 grains of the citrate dissolved in 10 minims of water, with 2½ grains of sodium salicylate. This was followed in an hour by 6 grains more given by the mouth, and 2 grains every two hours for six doses. The symptoms gradually improved, and next day the patient was partly conscious at times. On Aug. 26 the temperature went down in a few hours to 98°·1 F., and the patient made a steady recovery. It is probable that the caffeine acted as a heart stimulant and determined a better supply of blood to the cerebro-spinal centres. RICHARD NEALE, M.D.

1705. *Liebman on a Case of Myocarcinoma of the Uterus.*—The patient was 44 years old when she came under Dr. Liebman's care, and had borne two children. For two years she had been subject to irregular uterine hæmorrhage, accompanied by sacral pain. Recently a fœtid discharge, watery and abundant, escaped from the vagina. Cachexia was marked, and pain very severe. A soft, friable, and lobulated tumour, 'the size of an orange,' was detected in the vagina. It protruded from the uterus, which was not appreciably enlarged. The tumour was removed—partly by the hand, partly by aid of the sharp spoon. The vagina, cervix, and greater part of the endometrium were apparently free from infection. The tumour sprang from a pedicle attached to the fundus. The site of the pedicle was carefully scraped. Soon after this operation the uterus and cervix felt normal. The tumour was made up of muscle-cells and epithelial cells; it was, in fact, a cancerous fibroid polypus. In some of the bundles of muscular fibre proliferation of nuclei was observed. Connective tissue was scanty, being almost confined to the neighbourhood of the blood-vessels. Alveolar spaces, full of polymorphous cells of epithelial type, abounded; they were large or small, according to the consistence of the tumour at different points. The cells also varied in size, and showed signs of fatty and hyaline degeneration and vacuolation. The nuclei were mostly large, round, granular, and proliferating actively. In parts the tumour bore the microscopic appearances of a medullary cancer. The tumour was removed in May 1887; in September the cancer recurred, involving the cavity and posterior part of the cervical canal. The parts were scraped. The uterus was movable, and hardly enlarged; but, as cachexia was marked, it was not deemed advisable to remove the organ through the vagina. Twice was the scraping repeated after the last date. Fever, and stabbing pains in the chest, with hæmoptysis, set in. The patient died in June 1888. At the necropsy both lungs were found infested with secondary deposits, some the size of a pigeon's egg. The pleuræ and bronchial glands were not involved. The deposits resembled the primary growth in structure; they seemed to have developed out of the muscular elements already existing in the parenchyma of the lungs. Most of the pelvic and abdominal lymphatic glands were infected; they contained muscular and epithelial elements. The uterus measured 5½ inches. Only the anterior lip of the os externum had escaped infection; elevations were seen under the serous coat. The left ovary was entirely converted into a medullary mass; the right ovary was extensively invaded. The cancerous deposits in the ovaries consisted of muscular bundles and alveoli filled with epithelial cells, precisely resembling the primary growth and the secondary deposits in other parts.

1706. *Diamant on a Case of Precocious Menstruation.*—In a child, aged six, the pelvis, thighs, and mammæ were developed as in an adult. The pubes and axillæ were covered with hair. The child had cut all her teeth when a year old. When four years of age she weighed fifty-nine Vienna pounds, when six, seventy-nine. The catamenia appeared when she was hardly two years old, and recurred regularly for two years, each period lasting four days. When six years old, they ceased, and had not reappeared six months later, when the case was reported. At each date, when the period should have occurred, epileptiform convulsions came on during sleep and lasted from half to three-quarters of an hour. The number of fits increased monthly. The family history threw no light on the case.

ALBAN DORAN.

1707. *Trélat on the Treatment of Retro-Deviations of the Uterus.*—The author endeavours to justify recourse to Alexander's operation for simple retro-deviations of the uterus, whether mobile or fixed, but not complicated with pelvi-peritonitis, salpingitis, or pelvic tumours. During the past two years he has performed Alexander's operation fourteen times. He does not allude to the five cases of fixed retroflexions, the results of which have been previously published. Of the other nine, two are still too recent to permit of anything definite being said, and two others have been lost sight of. In all the remaining five the results were most satisfactory; the uterus has remained fixed in ante-version, and the abdominal pain has not returned. The usual causes of non-success are metritis, pelvic adhesions, and small neglected salpingites. He insists on the fact that all cases of retroversion tend to become painful, and cannot be effectually combated by pessaries. In conclusion, he maintains that Alexander's operation always gives good results, when judiciously employed.

1708. *Le Bec on a Case of Soft Fibroid removed by Supra-vaginal Hysterectomy.*—The patient, 31 years of age, a virgin, had suffered from profuse leucorrhœa. Abdominal palpation revealed a movable mass reaching to within two fingers' breadth of the false ribs. The tumour was attached to the uterus. It was diagnosed to be a sub-peritoneal fibroid, pressing on the viscera and growing rapidly. Supra-vaginal hysterectomy was decided upon, and was performed on Feb. 9. The incision was made to extend four fingers' breadth above the umbilicus and the tumour was drawn out. It was about the size of a uterus at term. The ovaries were turgid, and venous trunks of enormous size ran from the broad ligaments. These were ligatured and divided between clamps, and the uterus was removed just above the cervix. The tumour, after removal, weighed two kilogrammes. On the 15th, symptoms of intestinal obstruction made their appearance, and on the 18th, as the symptoms were even more intense, laparotomy was performed. When the hand was passed into the peritoneal cavity, the omentum could be felt rolled upon itself, and firmly fixed at its extremity to the pelvis. It was detached by pulling upon it, but at that moment respiration ceased, and the patient became cyanosed. She came round after twenty minutes' artificial respiration. As the omentum could not be prevented from returning to the same place, it was resected and the wound closed. The patient was put back to bed in a very critical condition, breathing badly and complaining of a feeling of oppression. Notwithstanding every effort to stave off the fatal result she died from asphyxia a few minutes afterwards. No autopsy was allowed. The author attributes this unfortunate result to intense congestion of the lungs, due to reflex irritation consequent on internal strangulation, and favoured by the chloroform vapour.

1709. *Philbert on Wasting as Affecting Sterility.*—Obesity, when it attains a condition of polysarcia, has a great influence on generation. In man it checks the development of the genital organs if early, and markedly diminishes sexual desire if late. In females, amenorrhœa and dysmenorrhœa result from an excess of fat, which accumulates in the abdomen and exercises an injurious pressure on the utero-ovarian apparatus. In such cases loss of weight is often followed by a return of the normal menstrual function, and fecundation once more becomes possible. The author quotes five cases in which loss of weight, brought about by active hydropathic and dietetic treatment, resulted in pregnancy. The ages of the patients varied from 21 to 27.

1710. *Lutaud on the Influence of Morphine on the Uterine Apparatus.*—The author communicated to the Paris *Société de Médecine*, three years since, a paper drawing attention to a hitherto unrecognised symptom of the morphine habit. He had found, in a limited number of observations, that morphine exercised a peculiar influence on the ovaries, diminishing and even abolishing menstruation. He now publishes a further and extended series of observations of the same kind, which not only confirm his previous assertions, but afford several therapeutical indications of value. He has remarked the total suppression of the menses in eighteen cases as soon as the amount of morphine attained a certain dose. All the patients had taken to morphine on the advice of their medical attendant for the relief of uterine disorders, which, however, had in every case ceased to exist when they came under observation. The suppression of the flow was therefore due to the influence of the drug and not to the primary ailment. He gives the history of eight characteristic cases of women, under 40 years of age, in whom suppression of the menses had taken place with a minimum daily dose of 4½ grains of morphine. He concludes (1) that morphine has an elective action on the uterus, suppressing menstruation and extinguishing the reproductive function; and (2) that this elective influence is characterised by the extinction of all sexual desire. He suggests, therefore, that morphine would prove of service in the treatment of women suffering from affections which are aggravated by the menstrual flow, such, for instance, as fibroid. He has put it to the test in cases of fibroid and cancer of the uterus, and the results appear to him to have been satisfactory.

Alfred S. Gubb.

SYPHILOGRAPHY.

RECENT PAPERS.

1711. Hirschberg.—On Specific Inflammation of the Cornea. (*Deutsche med. Wochensch.*, and *Viertelj. für Derm. und Syph.*, Heft 5, 1888.)

1712. Kraus.—A Contribution to the Knowledge of the Action of Mercury on the Intestine. (*Deutsche med. Wochensch.*, and *Viertelj. für Derm. und Syph.*, Heft 5, 1888.)

1713. Pajor.—Urethritis Membranacea Desquamativa. (*Archiv für Derm. und Syph.*, Heft 1, 1889.)

1714. Touton.—Folliculitis Preputialis et Paraurethralis Gonorrhoica. (*Ibid.*)

1715. Gulliver.—Syphilis of the Trachea and Bronchi. (*Lancet*, March 9, 1889.)

1716. Lowndes, F. W.—A Case of Dactylitis Syphilitica. (*Ibid.*, March 23, 1889.)

1717. Phillips.—A Case of Syphilitic Fever resembling Tertian Ague. (*Ibid.*, April 13, 1889.)

1718. Stern, Dr.—On the Treatment of Gonorrhœa by Oily Injections of Lanoline. (*Rev. Gén. de Clin. et de Thérap.*, May 2, 1889.)

Art. 1711. *Hirschberg on Specific Keratitis.*—Professor Hirschberg, of Berlin, has observed in all about 500 cases of this affection, which indicates that the proportion of cases of keratitis in the whole number of eye diseases is about the same in Berlin and in London—that is, about 6 in 1,000. The patients were mostly between the ages of 5 and 15 years, rarely over 25. As rare accompaniments of the eye affection, gummy destruction of the hard palate, sinking in of the nose, scars at the angles of the mouth, and multiple paronychia were observed, and somewhat more frequently a 'dwarfed' condition of the body was present. 'Hutchinson's teeth' were found in over 10 per cent. of the whole number of cases, and chronic joint effusions and deafness were frequently present. Two points as regards the eye affection itself are especially emphasised. First, that in the so-called keratitis the iris nearly always, and the parts behind it frequently (16 per cent. of the author's cases), are implicated also. With the ophthalmoscope, rose-coloured, whitish, dappled, or black foci, like those seen in the retinitis of acquired or inherited syphilis, were observed. The second point is that specific keratitis is always accompanied by the formation of new vessels, and that these vessels never afterwards disappear. The author has been able, with the aid of a powerful lens fixed behind the ophthalmoscopic mirror, to detect them at various periods up to 13 years after the beginning of the keratitis, and he considers them characteristic signs of inherited syphilis. They have been found although the cornea appeared to be clear to the unaided eye. Mercury, followed by iodide of potassium and iodide of iron, is the form of treatment recommended. In many of the author's cases iridectomy was performed with good results.

1712. *Kraus on the Action of Mercury on the Intestine.*—Dr. H. Kraus reports that a man, aged 30, after two injections of 1 decigramme of calomel, with a week's interval between the two, developed symptoms of mercuric poisoning. There was almost complete anuria and vomiting, and the stools were thin and bloody. Death took place in a few days. The *post mortem* showed severe dysentery, perforation of the sigmoid flexure, and commencing peritonitis.

1713. *Pajor on Urethritis Membranacea Desquamativa.*—Under this title Dr. A. Pajor reports two cases observed in the clinic of Professor Schwimmer at Buda-Pesth. Case 1.—A man, aged 28, was admitted on Feb. 5, 1888, complaining of burning in the perineal portion of the urethra, as well as about the anus, where there was an eczematous rash from scratching. The glans penis was bluish in colour, and a feeling of coldness in the part was complained of.

Over the right half of the glans the prick of a pin was not felt. The patient also complained of a feeling of formication along the spinal column, and there was muscular tremor of the extremities and head, and a general state of dejection. The history was as follows:—In 1879 gonorrhœa with swelled testis (right). In 1881, swelling of the left testis after a long march. In 1885, frequent emissions, and a burning sensation in the urethra on micturition. In 1887, catarrh of the bladder and strangury. Subsequently, again frequent emissions, depression, loss of appetite, irregularity of the bowels, trembling of the limbs and neck. Intercourse had not been attempted for a year, as sexual desire had been absent for that length of time. On admission, bromide of potassium was given, and metal sounds were passed at intervals of three days, with good effect. On Feb. 15 an endoscopic examination was made. The urethra then felt like a stiff and rigid tube resisting the passage of the endoscope, so that No. 20 (Charrière) could only be passed slowly. The whole of the mucous surface from the prostate to the fossa navicularis was of a greyish-white colour. Tincture of iodine (1 per cent.) was applied. On the 20th the endoscopic appearance was unchanged, but the emissions had ceased. On the 27th, the colliculus seminalis looked normal, with the exception of redness. March 1.—The subjective symptoms had improved. Nocturnal strangury, which had now and then been troublesome, had disappeared, and the burning in the urethra was less; iodine was again applied. On the morning of March 4 a delicate white cylindrical membranous tube was expelled on micturition. This membrane, which was 9·5 centimètres long and 0·5 centimètre broad, formed a cast of the urethra, and in parts was thrown into numerous small folds. On March 5 the endoscope showed the caput gallinaginis prominent and hyperæmic, and the mucous membrane from the membranous to the anterior third of the cavernous portion red and inclined to bleed. The anterior third of the urethral surface was whitish as before. After this, bits of membrane continued to come away from time to time with the morning urine. The stream, which had been small and sluggish, became normal; all the pains and neurotic symptoms disappeared, and the patient was discharged well on April 1. In the second, as in the preceding case, the patient, aged 29, had first suffered from gonorrhœa nine years before, and the discharge at the time of his admission (Jan. 26, 1888) had returned for the fourth time. He said he had lately been using strongly astringent injections. He complained of strangury and pain in the urethra, extending to the groins. There was a copious greyish-white discharge, seen chiefly in the morning. He was treated with sandal-wood oil internally, and the passage of sounds. On Feb. 13 the endoscope showed that the mucous membrane from the membranous to the middle of the pendulous portion of the urethra was of a whitish colour. On the 15th tincture of iodine (1 per cent.) was applied; and on the 18th, 19th, and 20th, a few drops of a 2 per cent. solution of nitrate of silver were injected. On the latter date the mucous membrane of the urethra was swollen and reddish-white in colour. A lead injection was ordered. A week later, a white crescentic patch was seen on the mucous membrane anterior to the membranous portion of the urethra. This was thought to be the result of the nitrate of silver. On March 1 a cylindrical fine white membrane, 1 centimètre long, came away with the urine. The urethral surface from the membranous part forwards was of a greyish-white colour, except a small portion near the orifice, which was red. A piece of the membrane was detached by means of a tampon. On March 3, a membranous cylinder, 5 centimètres long, came away with the urine. The patient then improved rapidly; the strangury disappeared, and the discharge was very slight when he went out on March 5. A microscopic examination of the membrane by Dr. Pertik showed stratified pavement epithelium with large nuclei, round cells, and migratory cells. The author refers to the rarity of membranous urethritis, and quotes several authors who have reported cases in which, under various circumstances, a membrane has formed in the urethra.

1714. *Touton on Folliculitis Preputialis et Paraurethralis Gonorrhoica.*—In this paper, Dr. Karl Touton, of Wiesbaden, begins by quoting extensively from a number of authors who have dealt with the inflammatory conditions of the accessory glands and their ducts, and of the various crypts or follicles of the urethra, and in its neighbourhood in both sexes. He then describes two cases (both in men) observed by himself. In the first of these, a man, aged 30, came to the author on Sept. 7 with a first attack of gonorrhœa of five days' duration. He was treated at first with oil of sandal wood and afterwards with injections. On Sept. 20 a painful swelling was noticed on the prepuce. This swelling was red, about the size of a pea, and situate on the right side of the raphé, just behind the preputial margin. On pressure three drops of thick bloody pus exuded from a minute opening on the left side of the swelling. The pus-cells in this discharge contained gonococci, but the urethral discharge was free from gonococci. The patient was directed to empty the abscess frequently by pressure, to cleanse the parts with a carbolic lotion, and to apply an ointment of corrosive sublimate over the swelling, with a view to prevent infection of the urethra. Till Oct. 8 the urethral discharge, which then disappeared, had remained free from gonococci. The preputial swelling was much less, the redness had disappeared, and the slight discharge from it was mucous in character, but it still contained gonococci. A cord-like swelling, about a centimètre long, could now be felt in the prepuce. To obviate the danger of reinfection of the urethra, or infection of the patient's wife, this cord was excised, and the resulting wound healed in a few days. Microscopical examination of the excised cord-like swelling seemed to show that it had most probably originated in an epithelial involution of the skin. The lumen of the crypt was surrounded by a small-celled infiltration, and there were a few short lateral branches from the main channel in which gonococci were found. The second case was that of a man, aged 23, who came under the author's observation on Feb. 26, during the fourth week of an attack of acute gonorrhœa. The patient said he had noticed a few days before a sore place on the glans penis. On removing a small scab which was situated on the glans, to the right of and beneath the meatus urinarius, a sharply defined opening about the size of that which would result from the prick of a pin was seen, and from this, on pressure, thick pus exuded, and this contained pus cells with gonococci and epithelium. The urethral discharge also contained gonococci. A probe introduced through the minute opening in the glans could be passed a distance of two millimètres. A few days later the probe passed five millimètres, and in the direction of the urethra, but no communication with the urethra could be made out. On March 3 there were numerous gonococci in the secretion from the duct, but none in that from the urethra. Four days later there were no gonococci in either. In a month the minute opening had closed and the urethral discharge had ceased, but shreds were still found in the urine. In his remarks on these cases the author points out that affections of this kind, though at first sight apparently of but little importance, are really of considerable moment from a practical point of view. For example, he remarks that if in the first case the discharge from the abscess in the prepuce had not been examined by the microscope the patient, who was married, when there remained only a few shreds in the urine and a trace of clear discharge from the small opening in the prepuce, would probably have taken no further trouble in the matter and would have infected his wife. It was fortunate also, the author thinks, that he did not in this case follow the method of treatment recommended by Oedmansson, Pontoppidan, and Bergh, which consists in the introduction of a probe armed with nitrate of silver, for the recesses and branches of the crypt, which were the chief stronghold of the gonococci, could not thus have been reached. The abscess might have been freely laid open and scraped at the beginning had it not seemed likely that it might close up spontaneously when kept empty by frequently repeated squeezing. In inflammation of these small paraurethral and preputial crypts in gonorrhœa, the discharge proceeding from them should always be carefully examined for gonococci; and in the case of the prepuce, incision and scraping or excision would be the line of treatment to be pursued, while the paraurethral ducts should be dealt with by the passage along them of a probe coated with nitrate of silver, or with wool dipped in a solution of the same salt, or of corrosive sublimate or tincture of iodine. In corresponding affections in women Martineau found the best results from the galvano-cautery, the wire being introduced cold and suddenly brought to a white heat; but in the neighbourhood of the urethra, where this plan is inadmissible, he uses injections (1 to 500) of corrosive sublimate.

1715. *Gulliver on Syphilis of the Trachea and Bronchi.*—At a meeting of the Pathological Society on March 5, Dr. Gulliver showed a specimen of syphilitic ulceration of the trachea and large bronchi, taken from the body of a woman aged 38. The larynx and upper part of the trachea were healthy, but one inch and a half above its bifurcation ulceration began, and extended for an inch into the bronchi. The mucous membrane had been eaten away, and the cartilages were laid bare. Contraction had produced constriction of the bronchi. There was extensive syphilitic ulceration of the soft palate. The patient died of broncho-pneumonia and pleurisy, and stridor had been a prominent symptom.

1716. *Lowndes on a Case of Syphilitic Dactylitis.*—The patient in this case was a woman who had contracted syphilis from her husband ten years ago. When Mr. Lowndes first saw the patient, in December 1888, she had a scaly rash on the scalp and forehead, and ulcers on the arms and legs. Nearly all the fingers of both hands had been swollen and painful six months before. On seeing the hands, Mr. Lowndes was reminded of the illustrations of syphilitic dactylitis in Bunstead and Taylor's work on venereal diseases. The left hand was first affected, the disease having begun in the first phalanx of the middle finger; the first phalanx of the index was next affected, and then the little finger. The index and middle fingers of the right hand were affected later, and afterwards the little finger. The thumb and ring finger of both hands had escaped. The swellings were somewhat globular in form. That on the right index burst at the metacarpo-phalangeal joint, thick yellow matter escaped, and an ulcer remained which healed under treatment. The little finger of the right hand suffered most severely, and the swelling burst at the metacarpo-phalangeal joint, leaving a gaping surface. The finger was kept extended, and mercurial plaster and lint spread with mercurial ointment were applied. The internal administration of mercury and iodide of potassium, which had been carried out from the first, was continued, and at the time of the publication of the report the fingers were all gradually resuming their normal shape.

1717. *Phillips on a Case of Syphilitic Fever resembling Tertian Ague.*—Dr. Sidney Phillips read a paper on this case before the Medical Society of London on April 1. A woman, aged 27, was married in 1879. Six months later her hair began to fall, and she had ulceration of the tongue and sore throat. Her first three pregnancies ended in miscarriage. She then bore four healthy children, and these were followed by another miscarriage. The husband had had syphilis six months before marriage. In May 1888 the woman was attacked by fever with shivering and sweating. The attacks at first occurred every day, and then every other day. Ten days after admission into hospital [date of admission not stated] quinine was given in two-grain doses three times a day, and then five grains before the expected pyrexial attack. This at first checked the height of the temperature curve [what this height was is not stated], but afterwards lost its effect, and an increased dose did not improve matters. At length [date not stated] iodide of potassium and mercury were given, which not only reduced the temperature, but also relieved the distressing headache and vomiting which had been present. No evidence of any local syphilitic lesion could be obtained. Erythema nodosum was present, and, apart from syphilis, it was rare to find this accompanied by fever. John Hunter and Fournier had described cases of syphilitic fever similar to that brought forward, but none so late as the ninth year after infection. These rare varieties of specific tertian fever occurred usually in women. The long duration of the pyrexia (eight months) was also a matter of interest.

Arthur Cooper.

1718. *Stern on the Treatment of Gonorrhœa by Oily Injections of Lanoline.*—This treatment comprises the urethral injection of medicated oily solutions of lanoline, in order to obtain the more prolonged action of the drugs on the mucous surface of the urethra. After eight days of this treatment, astringent injections are substituted, and finally, 1½ per cent. aqueous solutions of resorcin. The first injection consists of 25 parts of lanoline in 75 parts of almond oil. The second contains:—Salicylic acid 5 grains, lanoline ʒvj., almond oil ℥ijss. Lastly, sulphate of zinc 1gr., distilled water ʒjss., lanoline ʒv., almond oil ℥iiss.

Alfred S. Gubb.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

1719. WILLIAMS.—A Case of Morphine Poisoning. (*Therapeutic Gazette*, Feb. 15.)

1720. ABADIE.—On a Death from a Hypodermic Injection of Cocaine. (*La Médecine Hypodermique*, March.)

1721. PUTNAM.—On Chronic Arsenical Poisoning. (*Boston Med. and Surg. Journal*, March 7.)

1722. BALL.—On a Medico-legal Case in which the Needle of an Aspirator was plunged past the Right Pleural Cavity, through the Diaphragm, and into the Liver, with Fatal Effect. (*New York Med. Record*, March 9.)

1723. CROTHERS, T. D., M.D.—Should Inebriates be Punished for Crime by Death? (*Medico-Legal Journal*, vol. vi., No. 3.)

1724. RENTON, A. WOOD.—Testamentary Capacity in Mental Diseases. (*Medico-Legal Journal*, vol. vi., No. 3.)

1725. VINEYARD, J. H., M.D.—Heroic Treatment in a Case of Strychnia Poisoning. (*Weekly Medical Review*, April 13.)

1726. ROSS, JAMES, M.D.—Poisoning by Roburite. (*Medical Chronicle*, May 1889.)

1727. REYNOLDS.—A Case of Poisoning by Nitro-Benzole. (*Med. Chron.*, May 1889.)

1728. RUSSELL, SURGEON-MAJOR E. G.—On a Case of Cut Throat: Homicide or Suicide. (*Indian Med. Gazette*, February 1889.)

1729. POKROVSKY.—On Poisoning by Ham and Caviar. (*Proceedings of the Tambov Medical Society*, No. 3, 1888, p. 71.)

1730. MÜLLER.—Poisoning by Antipyrin. (*Illustrated Med. News*, April 1889.)

1731. NIKITIN.—On the Second Life-Test in the Corpses of Children. (*Deutsche med. Zeit.*, No. 14, 1889.)

1732. BOUCHERON AND NOIR, DRS.—Intoxication by Decomposed Preserved Meat. (*Rev. Gén. de Clin. et de Thérap.*, April 4, 1889.)

ART. 1719. *Williams on a Case of Morphine Poisoning.*—Dr. T. H. Williams reports in the *Therapeutic Gazette*, Feb. 15, the following case:—A married woman, aged 47, took 25 grains of sulphate of morphine, packed in three capsules, at 1 P.M. She was seen at 7 P.M., up to which time there had been no narcotic effects, but her pupils were 'pin-hole.' At 8 P.M., and again half an hour later, sulphate of atropine, $\frac{1}{10}$ grain, was injected; the effect on the pupil was very transitory. At 9 P.M. she became somnolent and then comatose, the pulse became too rapid and intermittent to count; strychnia, $\frac{1}{20}$ grain, was injected and nitrite of amyl given at intervals. Half an hour later the respiratory centre failed and artificial respiration was commenced. At 10.30 P.M. the induced current was employed, one pole being placed over the phrenic nerve in the neck and the other a little below and to the left of the ensiform cartilage. At 11 P.M. the atropine was again used when the pulse fell to 120, and the respiration rose to 10 per minute. At 12 P.M. the strychnia was repeated and the faradisation, but the nitrite of amyl was discontinued. At 4 A.M. the atropine was repeated, and at 8 A.M. the patient awoke and was out of danger. Dr. Williams considers that the strychnia and nitrite of amyl had a large share in the successful result, and strongly deprecates the usual plan of laborious and fatiguing exercise as unrelenting barbarity, the proper aim being to keep up the bodily strength and temperature.

1720. *Abadie on a Death from a Hypodermic Injection of Cocaine.*—M. Abadie recorded the following case at a recent meeting of the Société d'Ophthalmologie, Paris (*La Médecine Hypodermique*, March). The patient was a woman, aged 71, who was about to undergo an operation for entropion, and he injected a 5 per cent. solution of cocaine containing the equivalent of about four centigrammes of cocaine. In five minutes the parts were anæsthetic and he did the operation; she complained of no pain, but M. Abadie noticed that in getting off the couch she staggered; arrived in the adjoining room she fell to the ground as if in a faint. Her respiration ceased, her face became cyanosed and her lips livid. Her tongue was drawn forward, and artificial respiration was commenced, and two injections of ether were administered. At the end of half an hour she was so far recovered that she could speak a few words, and she was then put to bed and given some caffeine; but in spite of all efforts she gradually sank and died five hours after the injection. The *post mortem* examination was refused.

1721. *Putnam on Chronic Arsenical Poisoning.*—Dr. J. J. Putnam reports in the *Boston Med. an Surg. Journal*, March 7, the following case of chronic poisoning by arsenic from a wall paper: The patien was a lady, aged 43, who in the spring of 1887 began to suffer from severe pain in the epigastrium; sh had only recently returned from a holiday and ha moved into new lodgings. The pain recurre periodically, coming on in the morning and passing away in the afternoon; it was unconnected with any sign of digestive disorder except intestinal flatulence and was not relieved by the most stringent dieting or by medicinal treatment, but was somewha relieved by a full meal. This pain continued withou material change through the autumn and winte and the following spring, unaccompanied by any other sign of illness, except that the patient fel fatigued after the attacks, and finally began to los sleep and appetite. Then she first noticed tingling in the fingers, lips, and tongue, and a slight twitching of the fingers on attempting to write; the righ band was worse than the left. These symptom continued with varying intensity for many months the feet were affected in a similar manner, at first i a less degree than the hands, but afterwards mor severely. She also after a time began to be troubled with soreness of the hands and wrists on pressure so that she dreaded to shake hands, and writing which had formerly been easy and habitual becam a labour, from which she shrank; moderate pressur on the arms as in lying on the side caused a sens of formication so uncomfortable that she frequently refrained from lying down; the same sensation wa readily excited in the legs by crossing one over th other. A careful electrical examination showed that the minimal faradic reaction of some of th extensor muscles of the fingers as well as of th opponens and flexor proprius pollicis were less good for the right arm than the left. The muscular powe of both arms was diminished, but especially that o the right. The sensibility of the tips of the finger of her right hand as compared with the left wa found slightly but markedly diminished, and a analysis of the urine revealed a large quantity o arsenic. Arsenic was found in the wall papers o three of her rooms, that of her bedroom containing the largest quantity.

1722. *Ball on a Medico-legal Case in which the Needle of an Aspirator was plunged past the Right Pleural Cavity through the Diaphragm, and into the Liver with Fatal Effect.*—Dr. J. M. Ball, jun., reports in the *New York Medical Record* of March 9, a case of alleged malpraxis, which was the subject of a trial in Iowa State, U.S.A. The undisputed testimony showed that a farmer, aged 38, of previously good health, contracted a severe cold, for which he consulted a doctor, in March 1885. The doctor found marked dulness over the right side of the chest, extending downward from a line drawn horizontally across the right side and about one inch above the nipple. He expressed the opinion that his patient was suffering from pleurisy, and three days later he returned with an aspirator and proposed to aspirate the right pleural cavity for diagnostic purposes. This was consented to, and the aspirator was used, but no fluid was found. Immediately afterwards the patient's breathing became rapid and difficult, and great pain, which was paroxysmal and frequently recurring, was complained of in the right hypochondriac region. In twenty-four hours he was delirious and his abdomen was swollen and tympanitic; he died four days after the tapping. At the *post mortem* there was pneumonia of the right lower lobe, and diffuse general peritonitis. The superior surface of the right lobe of the liver presented a wound about 1⅛ in. long and ¼ in. deep; the diaphragm was intensely inflamed at a corresponding spot, and between it and the liver was some clotted blood. The jury found a verdict for the plaintiff against the medical man, damages fifty dollars. The following questions were submitted to the experts employed:—1. Do you know any cases on record where the surgeon in attempting to remove an effusion from the pleural cavity has plunged his instrument through the diaphragm into the liver with fatal effect? 2. Supposing a needle three inches long be inserted into the sixth intercostal space over the right side and in the axillary line, and at a right angle to the chest-wall, what important organs would such a needle pass through or injure, assuming the parts to be in their normal position? 3. Would it be possible in your opinion to produce a wound one inch in length and ⅛th of an inch in depth, by means of the needle of an aspirator introduced at right angles to the body, for a distance of three inches into the seventh intercostal space on the right side, assuming the organs to be in their normal position? 4. What is the distance from the sixth intercostal space in the mid-axillary line of the right side to the nearest point of the liver, assuming the parts to be in their normal position? 5. Assuming the needle of an aspirator to be inserted at the sixth intercostal space of the right side, passing through both layers of the pleura through the diaphragm, and through both layers of the peritoneum, would it be possible to produce in the convex surface of the liver a wound one inch in length and one eighth of an inch in depth?

1723. *Crothers on Should Inebriates be Punished for Crime by Death?*—In a paper on this subject read before the Medico-Legal Society of New York, Dr. Crothers arrived at the following conclusions: 1. The legal treatment of insanity has changed in obedience to a more accurate knowledge of the brain and its diseases. 2. The legal treatment of inebriety is unchanged to-day. Although it occupies two-thirds of the time of the courts, all teachings of science and a larger knowledge of the inebriate and his malady are ignored. 3. The ruinous error of punishment by fines and imprisonment of inebriety, and petty crimes associated with it, which notoriously increases and perpetuates the inebriate and criminal is a fact demonstrable in every community. 4. Thus public opinion through mediæval theories and laws are training and preparing a class of inebriates who first commit petty then capital crime with a certainty that can almost be predicted. 5. The death penalty for such crime utterly fails for the same reason. The execution of any number of this class simply opens the door for an army already prepared and trained to take their places. 6. From a scientific study of these cases, it is clearly apparent that they are diseased and incapacitated to act sanely. Alcohol has palsied the brain and made them madmen. The very fact of continuous use of alcohol is evidence of mental impairment and unreasoning act and thought. 7. To hold such men accountable for their acts and by punishment expect to deter them from further crime, and by such punishment check others from similar crime is an error which both scientific teaching and experience point out. 8. The object of the State through the law is to protect society and the individual; but if the execution of the law-breaker fails to accomplish this end, the laws are wrong. 9. The unfounded fear that the plea of insanity in crime and the failure to punish is an encouragement for further crime is flatly contradicted by statistics. 10. Among the mentally defective, the insane, and inebriates, the death penalty is followed by an increase rather than a diminution of crime. 11. The inebriate should never be hung for crime committed while under the influence of alcohol. 12. This method of punishment is never deterrent, but furnishes an attraction for other inebriates who commit similar crime in the same way following some law of contagion. 13. The inebriate murderer should be confined the rest of his life in a military workhouse hospital. He should be under the care of others as incapacitated to enjoy liberty and incompetent to direct his thoughts or acts. 14. A change of public sentiment and law is demanded and a readjustment of theory and practice called for. The criminal inebriate occupies a very large space among the armies of the defective who threaten society to-day, and his care and treatment must be based on accurate knowledge, not theory. 15. Inebriate murderers should never be placed on public trial where the details of the crime are made prominent or the farcical questions of sanity are publicly tested. They should be made the subject of private inquiry and placed quietly in a workhouse hospital, buried away from all knowledge or observation of the world. 16. The contagion of the crime and punishment would be avoided, and his services might repair some of the losses to society and the world. We do not think that the medical profession in this country will endorse all the views upheld by Dr. Crothers.

1724. *Renton on Testamentary Capacity in Mental Diseases.*— Mr. Renton puts the present state of medico-legal opinion on this topic in the form of propositions, thus: 1. A testator must possess a memory sufficiently active to recall the nature and extent of his property and the persons who have claims on his bounty, and a judgment and will sufficiently free from the influence of morbid ideas or external control to determine the relative strength of these claims. 2. Intellectual insanity *primâ facie* destroys testamentary capacity, but this presumption may in any case be rebutted by evidence of a lucid interval, or that the insanity and delusions of the testator were irrelevant to the subject-matter of his will, or insufficient to prevent the exercise of a disposing memory, judgment, and will at the time when the disputed instrument was made. 3. A lucid interval is not necessarily a complete restoration to mental vigour previously enjoyed, nor is it merely the cessation or suppression of the symptoms of insanity; it is the recovery of testamentary memory, judgment, and will as defined in proposition one. 4. An insane delusion is not merely an unfounded, though colourable, suspicion, nor even a belief which no rational person would have entertained; it is a persistent and incorrigible belief of things as real, which exist only in the imagination of the patient and which no rational person can conceive that the patient when sane would have believed. 5. Neither subsequent suicide nor supervening insanity will be reflected back upon previous eccentricity so as to invalidate a will. 6. Affective or moral insanity does not (generally?) destroy testamentary capacity. 7. Upon the executor who propounds a will rests the burden of proving (*a*) testamentary capacity, (*b*) knowledge and approval of its contents, and (*c*) due execution. 8. *Primâ facie*, an executor is justified in propounding his testator's will.

1725. *Vineyard on Heroic Treatment in a Case of Strychnia Poisoning.*—Dr. Vineyard writes that he was once called to see a negro who had swallowed half a drachm of sulphate of strychnia, thinking it was quinine. He administered chloroform until the jaws were relaxed, and then poured down his throat six drops of croton-oil and one hundred grains of hydrate of chloral; he repeated the chloral in smaller doses at intervals; the strychnia was passed per anum, and in less than four hours the patient was out of danger, and made a good recovery.

1726. *Ross on Poisoning by Roburite.*—Dr. Ross reports several cases of poisoning by roburite, a new explosive agent used for blasting in coal mines, and the chief constituent of which is di-nitro-benzol. The following is a brief account of the most typical of the half-dozen cases recorded in the paper before us. The patient was aged 42; he had been a miner for many years, had always enjoyed excellent health, and had always been a temperate man. Five months previously he had commenced using roburite, and soon noticed smarting of his eyes and face. This was followed by headaches, and, in about two months, he began to complain of numbness in his finger-tips and toes, shortness of breath and palpitation; more recently he had suffered from shooting pains in his legs, his grasp had become feeble, and his legs felt heavy and weak. He had lost flesh, become drowsy and apathetic, and his urine was sometimes very high-coloured. He was a well-built man, face extremely pale, lips of a bright-blue tint. His fingers and toes felt numb, but there was no affection of cutaneous sensibility. The intrinsic muscles of his hands were somewhat wasted, and his grasp was not what it should have been. The patient had lost all spring and elasticity in walking, but his feet did not drop. The patient complained of twitchings of the legs, especially when he was in bed; the knee-jerks were absent; the plantar reflex was normal, the cremasteric absent, and the patient stated that he had lost all sexual desire. The special senses were unaffected. His field of vision was not contracted, and his colour perception was normal. The urine was high-coloured, containing a deposit of pink urates, and a trace of bile; his conjunctivæ were slightly jaundiced. His blood was examined with the spectroscope, and it was found that the two bands to the violet side of the D line were not reduced to one on the addition of ammonium sulphide so quickly as in the blood of a healthy man. He rapidly improved when he desisted from his occupation. Dr. Ross points out that the nervous phenomena—the muscular weakness, loss of knee-jerks, &c.—must be referred to peripheral neuritis.

1727. *Reynolds on a Case of Poisoning by Nitro-Benzole.*—Dr. Reynolds reports the following case. F. O'B., 25, was brought to the Manchester Infirmary at 6.50 P.M. on March 19. He was quite unconscious, and of intensely blue colour, and all that was known about him was that he was employed at some aniline works, and that he had been sent home that morning sick, with instructions that he was not to be allowed to go to sleep. The case was recognised to be one of poisoning by nitro-benzole, and the patient was at once admitted, when the following note was taken:—'The patient lies easily on his back, and is quite comatose, appearing, however, rather as if in a deep sleep. On applying a strong faradic current to the face he responds merely by a few grunts and grimaces. All the limbs are flaccid and helpless, the tendon reflexes being increased in some measure. The extraordinary feature of the case is the most intense blueness of the whole body, particularly the hands, feet, face, and mouth. The eyes are closed, the pupils normal, reacting to light. The pulse is 100, regular; the respirations quiet, 32, markedly Cheyne-Stokes in character. The breath has an odour exactly like that of aniline oil, but not at all like that of almonds.' His face was then touched, when he at once aroused, and asked where he was, the Cheyne-Stokes breathing disappeared, and the respirations increased to 42. He complained of great drowsiness, and of an intense dull aching pain in the head, and a feeling of a heavy weight in the stomach. The blueness remained as before. He did not sleep well that night, owing to the headache, but was better next morning. On the following day he was much better, and able to go out; the cyanosis was slight; he still had some headache and anorexia. The urine was high-coloured, turbid, specific gravity 1,032, containing an excess of urea and a trace of bile, but no albumen, and no blood or globulin. He stated that he had been employed at the works for seven weeks, and that on March 16 he began to make picric. His duty was to heat and whizz a mixture consisting of nitric acid, carbolic acid, vitriol, and nitro-benzole, and the fumes from this mixture he constantly inhaled. On the 17th he felt sick, and had pains in the stomach and head, and the next day he was worse, and could hardly walk home. On the following day he was much worse, and the doctor came to see him, and gave him a quart of new milk and two eggs, and sent him home telling him not to go to sleep: he did go to sleep in the afternoon, and in the evening, as already stated, was brought to the hospital.

1728. *Russell on a Case of Cut Throat: Homicide or Suicide.*—In September 1888 the dead body of a girl was found with her throat cut. The body was lying on the bed with no marks of violence whatever about it excepting the wounds in the throat.

There was a gaping wound of the throat extending completely round its circumference except for 1½ inch behind, where alone the skin was unwounded. The upper margin of the wound measured 11½ inches, and was entire, not jagged or notched. It looked as if made by a single sweeping cut; its right extremity ended in a shallow tail 1½ inch long, the skin being the last part wounded; its left extremity was shallow for ⅔ inch, and then rapidly deepened. About the lower part of the middle of the front of the throat two other incisions joined in to form the main wound; these commenced about one inch to the left of the middle of the vertical line of the throat, lying over the inner end of the left clavicle; one was half an inch below the other. They ran with a depth of half an inch for half an inch, and then disappeared in the great gaping wound. All these wounds appeared to have been inflicted in a direction from left to right. Except for these two lower incisions jagging it, the lower margin of the great wound was clean-cut and entire. The terminations of the upper margin were about 1½ inch higher than its middle part; but the relative positions had been much altered by retraction of the tissues; the ends were on the same level on each side. There was ecchymosed blood in the tissues and muscles forming the margins of the wound. All the structures of the front and sides of the neck had been severed, and the spine wounded in three places. The muscles of the front and sides of the neck had been divided, as had been both common carotid arteries, both jugular veins, both pneumogastric, and both phrenic nerves. All these structures had only a single division on each side. The trachea was completely divided between its fourth and fifth rings, the fourth ring being cut through obliquely upwards at its posterior ends. The œsophagus was divided on the front of the body of the fifth cervical vertebra, and its right half cut by two other incisions below this. The vertebral column had three wounds on it; an upper one notching the lower front of the body of the fifth cervical vertebra, 1 inch long, ⅙th inch deep at right side, shallow at centre; a lower one of the same length and depth as the upper on upper front of body of sixth cervical vertebra; a middle one, 1½ inch long, running from left side of central line of inter-vertebral substance between fifth and sixth vertebræ, and cutting its way out of right side, where it was ⅓rd inch deep. All these were horizontally transverse in direction; their plane was slightly upwards; there was slight ecchymosis of the tissues of the spine at the margins of these wounds. The pharynx was natural, as also was the tongue, which was not swollen or marked by the teeth; the larynx was healthy; some bloody froth was found in the trachea below the wound and in the bronchi. The brain, thoracic, and abdominal viscera were healthy but bloodless; the stomach was empty; in the duodenum and upper part of the jejunum there was thick fluid bile-tinged food which had recently undergone gastric digestion. The colon contained fæcal matter; the rectum formed fæces; none extruded externally. Generative organs healthy; no sign of injury on any part; not pregnant; sexually immature; vagina short, shallow, dilated. The body was lying on its back in a pool of blood; *rigor mortis* was well marked; the face was calm. The left arm lay by the side of the body, the hand semi-clenched; the two distal joints of each finger, and the distal joint of the thumb were half flexed; there was blood along the undermost portion of the arm and all over the hand; the right arm was flexed at the elbow, the hand resting on the chest; the fingers were in precisely the same attitude as those of the left hand; the arm was only blood-stained where it was in contact with the bed-clothes, but the hand, like the other, was covered with blood. In the right hand was a razor, its blade open edge upwards towards the throat; the handle of the razor was between the proximal phalanx of the thumb and the palm of the hand above the root of the fingers, some of which touched it; it was not grasped and could be removed and replaced without altering the position of any part of the hand; the razor was much covered with blood and its edge was notched. All the blood effused had poured towards the back of the body. The body was identified as that of a native girl, aged 11, married, who had gone to bed with her husband at 10 P.M. the previous evening, and the husband had left the house the following morning at 4 A.M. The *post mortem* examination was made about twenty-eight hours after this date. The husband was tried and convicted of the murder, the evidence being purely circumstantial and furnished by the body. Dr. Russell discusses with great ability, and in a most exhaustive manner, all the points in the case bearing on the question of homicide or suicide. We regret that we can only afford space for a very condensed epitome of the leading points. The upper and great wound dividing all the structures on both sides was the first inflicted, and the other cuts, though begun separately, almost at once slipped into this; if it had been otherwise, the continuations of these other cuts must have been found separate from the main one. Granted, then, that the upper wound was first inflicted, the case could not be one of suicide, because it would be absolutely impossible for a person, after sustaining such an injury, to inflict any other wound on himself, however trivial, and practically the main wound in itself would be a proof of murder; for, although determined suicides have inflicted most terrible wounds on themselves, it is, nevertheless, impossible to believe that so extensive and clean-cut a wound could be self-inflicted. The upward plane of the wound, and the direction in which the blood had been outpoured suggested strongly that the wound was inflicted whilst deceased was lying in bed by someone standing behind her, and the absence of any signs of a struggle, or of any cries, favoured the idea that she had been attacked whilst asleep. The way in which the razor lay in the hand was strong evidence that the case was not one of suicide, for, apart from the improbability of her choosing such a mode of death or knowing how to use a razor, there was the absence of any cadaveric spasm in a case of undoubtedly very speedy death. The bloodless condition of the viscera proved that the wounds had been inflicted during life and had been the cause of death. The question of murder having been settled, it remained to fix the crime on the prisoner. The razor was shown to have belonged to the prisoner, and its condition was quite consistent with its having been used; then the evidence pointed to deceased having been murdered whilst asleep. The state of the digestion was held to be an evidence that the girl had died within six hours of taking her last meal, and, therefore, before the prisoner left the house. The only remaining point bearing on the case was the fact that *rigor mortis* was present when the *post mortem* examination was made. Ought it to have passed off if the deceased had been dead more than twenty-eight hours? This is a point on which careful observations are much needed; the rate of cooling, and the duration of *rigor mortis* have been pretty well worked out in this country, but there is much yet to be learnt regarding them in tropical climates. We have to thank Dr. Russell for a report that will certainly become classical.

1729. *Pokrovsky on Poisoning by Ham and Caviar.*—Dr. N. A. Pokrovsky, of Tambov, records (*Proceedings of the Tambov Medical Society*, No. 3, 1888, p. 71) a case of poisoning by ham, referring to a peasant woman, aged 33, and her three children, aged 5, 12 and 14. In spite of medical aid, all four died shortly after the ingestion of the poisonous food. Unfortunately no examination of the latter was made. Almost simultaneously, a case of fulminant poisoning by caviar occurred at Tambov. The patient, a clerk, ate one-eighth of a pound of pressed caviar towards the evening. Almost immediately vomiting supervened, followed by loss of consciousness with delirium and thickness of speech. When seen by Dr. A. F. Dobroff early in the morning, the patient was found to be intensely collapsed, with subnormal temperature, weakened pulse, locked jaws, quickened and shallow breathing, dry tongue and widened pupils. Tincture of valerian, infusion of coffee, hot bottles, &c., were employed, but failed to give any relief, the man dying some hours later. At the necropsy there was found an intense acute fatty degeneration of the liver and heart—so intense, in fact, that Drs. N. P. Tülüsheff and V. A. Bogoroditzky were inclined to regard the case as one of acute poisoning by arsenic or phosphorus. The circumstances of this interesting case, however, hardly admit any doubt that Dr. Dobroff had to deal with an instance of fish poisoning with predominating cerebral symptoms and with a fulminant course. V. Idelson, M.D.

1730. *Müller on Poisoning by Antipyrin.*—In the *Illustrated Med. News*, April 1889, attention is drawn to a case of antipyrin poisoning. A girl aged 10 years, suffering from acute rheumatism, was given antipyrin. The dose administered was about 11 grains three times a day. Although the drug acted favourably on the pain and the joint affection, each dose caused an appreciable rise of body temperature with nausea and fainting. A continuance of the drug produced severe cerebral symptoms and collapse. The patient complained of irritation over the whole body, and became unconscious; for one hour she remained in a very critical condition, with stertorous breathing. The face was swollen, and of a bluish marble colour, the lips swollen, the eyes protruding, and the conjunctivæ greatly injected. The pulse was scarcely perceptible at the wrist. On becoming conscious again she complained of headache, giddiness, and severe pain in the chest. The symptoms here described are unusual, and antipyrin, like many other drugs, is idiosyncratic in action. Richard Neale, M.D.

1731. *Nikitin on the Second Life-Test in the Corpses of Children.*—In the *Viertel. für gericht. Mediz.*, Dr. Nikitin, of Moscow, attaches greater importance to Breslau's second test than has been done by others—*e.g.* Liman. Nikitin has written a work in Russian 'On the Forensic Importance of the Test of the Upper Intestine (*Magendarm*) in Newly-born Children.' From an examination of 124 cases he has drawn the following conclusions:—1. This test can not only supplement that of the lungs, but may in some cases positively show whether the child has lived independently of the negative result of the lung-test; hence, on account of its forensic importance, it must be regarded and called the second test of life. 2. If, in fresh corpses of newly-born infants, the stomach contains air and floats, and especially if a portion of the intestine floats, it may be assumed with certainty that the child has lived after birth, unless, indeed, air had been artificially introduced into the stomach before birth. 3. If the corpse is considerably decomposed the intestine-test is very much inferior to the lung-test in positive results; but if there be moderate decomposition the positive test of the floating of the intestine is a criterion of great importance. 4. A negative result of the floating test of the intestine by no means implies that the child has been stillborn, but then neither does a negative result of the lung-test always prove that there has been no life after birth; consequently, only on the basis of the negative result of both tests in fresh, and still more in decomposed, corpses can there be the certain assumption that the child did not live after birth—that is, if there be no signs of a violent, and in such cases usually speedy, death of the infant. 5. If the stomach and a portion of the intestine of the corpse of a newly-born infant are filled with air and float, it is a sure sign in a fresh corpse and a probable sign in a moderately decomposed corpse that the child has not died directly after birth apart from artificial introduction of air into the stomach before birth. 6. The first bubbles of air enter the stomach by swallowing. 7. There is probably the possibility of the complete escaping of air from the lungs of newly-born children. 8. The artificial inflation of the lungs to restore to life children apparently stillborn is done either mouth to mouth or by a tube introduced only as far as the root of the tongue. To avoid emphysema the opening of the tube must not be more than a line in diameter.

John Elliott.

1732. *Boucheron and Noir on Intoxication by Decomposed Preserved Meat.*—Seventy men belonging to the same battalion were attacked with identical symptoms within from five to twelve hours after the ingestion of some preserved meat. They complained of shivering, followed by profuse sweats, headache, vertigo, pain down the spine, pleurodynia, and, in some cases, vomiting. There was also marked prostration, dyspnœa, and a small pulse at from 100 to 120 per minute. On the following day dryness of the mouth and dysphagia were present, with articular or muscular pain. Some of the men also had dilatation of the pupils and trismus. By the fourth or fifth day the symptoms began to disappear, and a crop of herpes labiales completed the series. All recovered. The meat in question was over four years old, and contained micrococci to which the above symptoms were attributed.

Alfred S. Gubb.

OPHTHALMOLOGY.

RECENT PAPERS.

1733. Nettleship, Mr.—On the Prognosis in Chronic Glaucoma. (*Ophthalmic Hospital Reports*, xii., parts 3 and 4, 2 and 3.)

1734. Bull, Chas. Stedman.—On the Surgical Treatment of Membranous Opacities in the Vitreous. (*Trans. Amer. Ophthal. Society*, 1888.)

ART. 1733. *Nettleship on the Prognosis in Chronic Glaucoma.*—These two papers are an abstract of three clinical lectures delivered at the hospital, and will form a very valuable addition to the clinical history of glaucoma. No competent person doubts the efficacy of iridectomy in acute glaucoma, but there has always been considerable difference of opinion as to its effect in chronic cases ; for while some surgeons operate in all cases, others believe that operation in such cases is useless and may be injurious. The natural progress of these cases is so slow, and cases differ so much that it is only by the collection of a considerable amount of clinical experience, such as we find in this paper, that we can hope to draw any conclusions. Taking only such cases as have been observed for not less than two years, the disease was arrested, and the eyes remained in the same state in about 50 per cent., improved in 30 per cent., while in 15 per cent. the disease continued. In order to estimate the effect of treatment it is important to ascertain as far as possible the usual course of the disease when untreated. An examination of a large number of cases shows that in most it progresses steadily to total blindness, but the time occupied varies immensely, two years being perhaps an average time, but a few cases show extreme chronicity. When the stage of blindness has been reached the eye usually remains quiet. The second eye escapes only very exceptionally, and it generally follows the same course, although occasionally the disease is chronic in one eye and acute in the other. As regards treatment of chronic cases the author places but little reliance upon eserine, he believes that it can only very rarely stop the progress of chronic glaucoma ; 'it is, however, a valuable means of lessening the frequency and severity of the threatenings which often for a long time precede the establishment of the permanent disease, and thus it certainly helps to keep the disease at bay for a long time. It also undoubtedly checks recurrent threatenings and fluctuations after operation.' He prefers iridectomy to sclerotomy as a primary operation, reserving sclerotomy for cases in which iridectomy fails, when it is made in the opposite direction. He considers that sclerotomy is less certain, and less permanent, than iridectomy. It has often been held that in cases of chronic glaucoma with very small visual fields, a further loss of the field is liable to be produced by the operation. Mr. Nettleship's cases do not confirm this view, in some of the cases in which iridectomy was performed the fields were in this condition, but some improvement followed the operation. The author takes a view distinctly favourable to the early performance of iridectomy in chronic glaucoma, and thinks that the 'conclusion is unavoidable that it is our clear duty to operate in chronic progressive glaucoma, and the earlier the better, and that even in advanced cases an operation should be performed, unless there are special reasons rendering it undesirable. If the disease is stationary, and in an early stage, and the patient can be watched and have the fields measured at intervals of a few weeks or months delay is permissible. In such cases eserine may be used, but in no case of chronic glaucoma should this take the place of operation when it becomes clear that the disease is advancing.' Apart from accidents during or consequent on the operation, the results would appear to be influenced chiefly by age, senile cachexia being distinctly unfavourable, and the condition of the pupil, this acting well to eserine in almost all the successful cases.

1734. *Bull on the Surgical Treatment of Membranous Opacities in the Vitreous.*—Although Von Graefe divided a membranous opacity in the vitreous with the result that vision was improved from counting fingers at 18 inches, and reading some words of 20 Jaeger with a convex ⅛ to 3 J. with the naked eye, these cases have usually been considered as lying beyond the range of operative interference. The grounds on which this view rests are the usual co-existence of other lesions, the presence in the vitreous of other opacities, the risk of setting up inflammatory reaction, and the mechanical difficulties of the proceeding. In this paper the writer gives an account of seventeen instances in fifteen patients, in which he had performed division of such membranous opacities. Considerable improvement in vision occurred in fourteen, and there is therefore sufficient ground for repeating the operation. The reaction, however, that followed in some shows that the fears expressed above are not altogether groundless, and that cases will have to be carefully selected. It is unfortunate that the description of the opacities is often not sufficient to show its nature. In the majority it would seem to have been a thin film, and therefore not incapable of spontaneous cure. We do not understand that in many the opacity was dense and white, as we believe it was in Graefe's case. The operation consisted in puncturing the globe just in front of the equator, immediately below one of the lateral recti, by preference the external, a cataract needle being used in some instances, and a broad needle with a double cutting edge, or a narrow cataract knife in others. When practicable, an ophthalmoscopic examination was made immediately before and immediately after the operation, but not during its performance, which seems a pity. Some of the cases operated on were very unfavourable, owing to the presence of other opacities. Case 4, for instance, is an example of this. The patient was a woman aged 22, always myopic (2·5 D. in the good eye). Nine years before she had received a violent blow on the left eye, followed by immediate loss of vision, and then by severe inflammation. When seen, the fundus presented 'the usual appearance of a myopic eye.' V. 5-100ths unimproved. Pupil dilated and immovable. Floating opacities in vitreous of varying (*i.e.* we presume, various) sizes and shapes, and 'a large thick vascularised membrane attached anteriorly to the outer ciliary region and posteriorly to the retina on the nasal side of the disc, entirely concealing the latter and the region of the macula.' The division was made with a small cataract knife, in a vertical direction, the membrane being felt to give way. The ophthalmoscope showed a small hæmorrhage. Some reaction followed, but on the tenth day the eye was quiet and V. 10-100. The ophthalmoscope showed a retraction of the nasal end of the membrane, while both ends moved freely as the eye moved. In some cases a good deal of reaction followed, but this was exceptional, and in one case an alarming amount of hæmorrhage took place, reducing V. to perception of light, but this was subsequently absorbed. One of the most satisfactory cases was No. 1, a man, aged 45, in whom the V. of L. E. failed after an inflammatory affection, which lasted four months; V. was 3-200ths. The cornea was clear, iris normal in colour and reaction. A 'broad, thin, membranous opacity running from the nasal margin of the disc downwards, forwards, and outwards to the lens. Both ends fixed, and the membrane becoming broader as it neared the lens . . . traces of an old choroiditis, marked by patches of atrophy, some of them surrounded by a zone of pigment. The membrane was lacerated freely with a needle in several directions.' An ophthalmoscopic examination showed that the membrane had been completely divided in two places, and incompletely in one. On the third day there was no reaction, and the V. had risen to 20-70 with correction. Three months later V. (corrected) had risen to 20·50ths, and the divided ends had retracted, leaving the optic disc and macula, which had previously been concealed, exposed to view. No. 11 was also a very encouraging case—a man, aged 35. The V. of L.E. had failed suddenly some years previously. He had had a chancre some nine years previously, and there were dust-like opacities in the vitreous of the other eye. V., R. E. 6-9, L.E. 10-200, a 'broad but very delicate membrane in the vitreous, fixed but wavy, obscuring slightly the entire fundus. Remains of an old choroido-retinitis.' A double-edged needle introduced, and membrane divided by a single sweep from above downwards. No reaction followed, and on the eighth day the ophthalmoscope showed that the membrane had been entirely divided, and that the ends had retracted on either side almost out of sight. V. 20-40ths. These cases certainly prove that the operation is very desirable in certain cases; we doubt, however, whether a surgeon would be wise in following our author and operating on a patient's only eye (Case 9), which already had V. of 20-50ths. Long freedom from all inflammatory symptoms, normal tension, and a good visual field are, we should say, all factors which should be present in order to give a fair chance of success. Given these conditions, and assuming that the opacity is one that is not likely to disappear spontaneously, the operation is certainly justifiable. We cannot but think that it would be much better that the surgeon should use the ophthalmoscope while operating. If the eye were thoroughly cocainised, and if the surgeon could obtain skilled assistance, the patient might sit in the chair as during an ordinary examination. W. ADAMS FROST.

DISEASES OF CHILDREN.

RECENT PAPERS.

1735. HUBER.—On Intubation. (*Archives of Pediatrics*, No. 61.)

1736. KEATING AND EDWARDS.—Clinical Studies of the Pulse in Childhood. (*Archives of Pediatrics*, vol. v., No. 60.)

1737. GREEN, DR. ORNE.—On Ear Disease in Diphtheria. (*Boston Med. and Surg. Jour.*, vol. cxx., No. 12.)

1738. MCCOLLOM.—Observations on Diphtheria in Boston during 1888. (*Boston Med. and Surg. Jour.*, vol. cxx., No. 12.)

1739. SZONTAGH, VON.—On a Case of White Syphilitic Pneumonia in a Child 5 Years Old. (*Jahrbuch für Kinderheilkunde*, Band xxviii., Heft 2.)

1740. BLACKADER.—On Retro-pharyngeal Abscess. (*Archives of Pediatrics*, No. 62.)

1741. CALDWELL.—On the Treatment of Diphtheria with a Spray of Hydronaphthol, Papain, and Hydrochloric Acid. (*Archives of Pediatrics*, No. 62.)

1742. NELSON. — On the Etiology of Diphtheria. (*Boston Medical and Surgical Journal*, vol. cxx., No. 11.)

1743. FOURRIER, DR., JUN.—On the Treatment of 'Thrush' by Saccharine. (*La Clinique*, April 18, 1889.)

1744. TORDEUS, DR.—On Whooping-cough. (*La Clinique*, April 11, 1889.)

ART. 1735. *Huber on Intubation.*—This paper, which was read before the Academy of Medicine of New York, embodies the result of an experience of 94 cases of diphtheritic stenosis. Of these, 49 were under three years of age, with a death-rate of 64 per cent., and 45 were between the ages of three and eleven years, with a death-rate of 55 per cent. The patients came almost exclusively from thickly-populated districts, with very unsanitary surroundings. Intubation was resorted to, no matter what complication existed, if the stenosis were such as to demand operative interference. Early operation was not favoured as the author is a strong believer in the employment of bichloride of mercury and steam. One great difficulty lay in the administration of nourishment. Tubes made with an artificial epiglottis were found to be unsafe, and rectal or nasal alimentation had to be resorted to in some cases. Dr. Huber recommends what he terms 'intermittent intubation,' which appears to mean the use of a tube so small as to permit of being coughed out by a vigorous effort of the patient. In one case cited as an example, the tube was in twelve hours and then expelled with a large cast; a few hours later it was re-introduced, and at the end of twelve hours again expelled with a cast. After the next insertion it remained in position only six hours, when a cast again accompanied its expulsion. Altogether, before permanent relief was obtained, it was inserted seven times. The object of 'intermittent intubation' is to prevent the danger of asphyxia occurring from occlusion of the tube with membrane and to allow of nourishment being given in the intervals; but, if the symptoms point to the localisation of the disease in the larynx and trachea, a full-sized tube should be inserted.

1736. *Keating and Edwards on Clinical Studies of the Pulse in Childhood.*—The pulse within an hour after birth settles down to a rate of 136 per minute. It is more rapid while the child is awake, particularly if sitting or standing; and this acceleration is most marked in feeble subjects. Observations to the number of 157 gave the following results, the upper figure representing the average beat during sleep and the lower the beat while awake:—1st week, $\frac{122}{125}$; 2nd to 4th week, $\frac{124}{141}$; 5th to 12th week, $\frac{116}{130}$; 3rd to 6th month, $\frac{112}{125}$; 6th to 12th month, $\frac{114}{128}$. The next list is the result of 34 observations. The lower figure indicates passiveness, the upper, active muscular movement or mental excitement. First week, $\frac{154}{125}$; 2nd to 4th week, $\frac{154}{141}$; 4th to 13th week, $\frac{159}{130}$; 3rd to 6th month, $\frac{150}{125}$; 6th to 12th month, $\frac{163}{128}$. As the child grows, the pulse is much less susceptible to all these influences, and we find the child of six years with a pulse of 100, and at thirteen this is reduced to 88. The pulse of the young child is very apt to be irregular from very slight causes, as dyspepsia, constipation, diarrhœa, ascarides, dentition, and anæmia. Much may be learnt from the sphygmograph, and the first peculiarity noticed will be that dicrotism is absent for the first twelve to fourteen years of life. The blood pressure is also disproportionately low in young children. Pulsus bigeminus rarely if ever occurs in childhood. Dropped beat is rare except in association with organic valvular disease, and especially mitral stenosis. Intermittent pulse is also rare in children, but it is sometimes met with after exhausting diseases.

1737. *Green on Ear Disease in Diphtheria.*—The important diseases of the ear are four in number, two acute, viz., diphtheritic inflammation and suppurative inflammation, and two chronic, viz., adhesions in tympanum and disease of muscles. The symptoms of the acute forms are fulness, pain in the ears or over the sides of the head, throbbing, subjective noises and deafness. But all these may be missed owing to the grave character of the throat affection. Examination of the ears in cases of diphtheritic extension will show the false membrane covering the exposed tympanum and deeper meatus. In cases of simple suppurative inflammation there will be dense redness about the manubrium and in the osseous meatus, the individual capillaries not being seen as in the early stages of the common tympanic inflammations. The redness soon extends to the whole membrane and rapidly becomes purple. Rupture next follows with ulceration, sloughing, and rofuse otorrhœa. Later, there may be separation f the ossicles, caries, and mastoid inflammation. The treatment of the early stage lies in a free ncision of the entire posterior half of the membrana ympani. This, by relaxing tension, relieving en-orged blood-vessels, and evacuating retained secre-ions, will usually prevent ulceration and sloughing. ntiseptic cleansing and drainage will complete the eatment.

1738. *McCollom on Observations on Diphtheria n Boston during* 1888.—The cases of diphtheria eached the maximum number in December, the umber for each month being as follows :—January, 10; February, 77; March, 102; April, 106; May, 39; June, 108; July, 94; August, 91; September, 2; October, 143; November, 153; December, 168. he numbers were fewest in the vacation there-re, and this difference could only be accounted for y diminished exposure to contagion [would not the ty be emptier in the hottest months?—*Rep.*]. The mplaint was distributed very evenly through the ty. In Ward 1, with a population of 17,208, there ere 63 cases. The drainage was found defective 32 instances. Ward 2, which is low and damp, d subject to floodings at high tides, had in 1887 cases, and last year only 17. The population is ,876. Ward 5, with a population of 13,065, had cases in 1887 and 27 cases in 1888. In about per cent. of the houses examined, defective ainage was found. This, however, was a doubtful ctor, as the elevated portions of the district suffered most more than the low-lying parts. The population of Ward 6 is 14,688. It is composed almost tirely of crowded tenement houses. In 1887 ere were 49 cases; in 1888, 126 cases; out of the 6 examinations made, the drainage was found de-ctive in 40. Altogether, the drainage was examined 1,117 instances, and was found defective in 596. he source of contagion was traced in 276 out of e 1,383 cases reported. The theory that diph-eria is more prevalent in the vicinity of old atercourses is not tenable as far as the Boston strict is concerned, since none exist. Neither oes the defective drainage theory apply; for the rainage in 1888, when most cases occurred, was uch better than in 1887. In conclusion, it would eem that the general extension of the disease must e attributed to contagion, especially from the mild nd unknown cases.

1739. *Szontagh on a Case of White Syphilitic Pneumonia in a Child* 5 *Years Old.*—The patient, a boy, who was well developed and well nourished, was admitted on Oct. 31 into the Stephanie Hospital, at Buda Pesth, for diphtheria with laryngeal stenosis. He was treated with lime-water as a mouth-wash, and as medicine corrosive sublimate in combination with white of egg. The next morning, two large condylomata were observed on the anus. Condition otherwise improved. By Nov. 7 the laryngeal symptoms had disappeared, the corrosive sublimate was therefore discontinued, and chloride of calcium substituted. By the 13th, the fauces also were quite free from membrane. The condylomata also improved, and were represented only by pigmentation on Nov. 15. With the exception of a slightly elevated temperature, recovery appeared to be complete on Nov. 16. This feverishness was accounted for next day by the presence of a diffuse scarlatina rash. This must have been contracted in the hospital. On Nov. 18 the temperature was 104°·9; intense dulness with bronchial breathing was discovered over the left half of the chest, from the fourth space behind, downwards. Pain was complained of in the same region. On the four following days the temperature fluctuated between 102°·4 and 104°. The rash changed but little, and on Nov. 22 death ensued from failure of the heart's action. The autopsy, made by Professor Hutyra, showed, besides some recent affection of the lower lobe of the right lung, about a litre of yellowish fluid containing some flakes of fibrin in the left pleural cavity. The upper lobe of the left lung was compressed and of fleshy consistence, grey and homogeneous on section. The lower lobe was covered with a thick pseudomembrane, and was of full size, dense, and contained no air. On incision it showed numerous shining, white-walled, thickened sections of bronchi and blood-vessels upon a dull, homogeneous, pale reddish-grey matrix. [In the absence of a microscopic examination, the diagnosis seems somewhat dogmatic.—*Rep.*]

1740. *Blackader on Retro-pharyngeal Abscess.*—The author gives the notes of three previously unpublished cases; only one of which, however, appears to have occurred in his own practice. The first patient was Alice H., aged 10 months, a poorly-nourished anæmic child, who had been fed with the bottle since the age of 2 months, and had in consequence developed digestive disorders and a succession of small 'furunculæ' on the scalp and about the body. She had been under treatment in St. Margaret's Nursery for six weeks when, on March 17, she had a convulsion. On the following day the temperature was 102°. There was slight cough, frequent sneezing, and the nostrils were blocked up with catarrhal discharge. The child remained somewhat feverish, and was losing flesh. On the 25th she appeared to be unable to swallow; the cry was faint, and there was considerable retraction of the epigastrium and lower ribs on inspiration. A few large râles were heard at both bases. The right cervical glands were slightly enlarged. Temp., 101°. On inspection of the throat, the pharyngeal mucous membrane was found red, and so bulging as to fill the upper part of the pharynx. With the finger a firm elastic swelling with ill-defined margin was detected. As the symptoms were urgent, a vertical incision was made with a guarded bistoury, and a quantity of pus escaped. Gentle pressure was made from below upwards during the next few days.

The child was then put on cod-liver oil and iron wine, and made a good recovery. The second case, that of a child 8 months old, followed a very similar course, beginning with a convulsion, and being followed after five or six days by dysphagia. The abscess, however, broke spontaneously. The child recovered, but the cervical glands went on to suppuration. The third patient was 9 months old, and had been feverish and had swallowed with difficulty for a week. On examination by Dr. Shepherd, a large fluctuating tumour was found protruding from behind the pharynx into the throat. Fluctuation was also readily made out upon a swelling behind the left sterno-mastoid. An external incision was decided upon, and it was made through skin and fascia behind the middle of the left sterno-mastoid muscle; a director was then thrust in towards the pharynx, and a quantity of creamy pus oozed out. Afterwards a pair of closed dressing forceps was introduced, the channel expanded, and several ounces of pus evacuated. The sinus discharged a good deal of thin watery pus through a drainage-tube. No caries of the vertebræ was detected.

1741. *Caldwell on the Treatment of Diphtheria with a Spray of Hydronaphthol, Papaïn, and Hydrochloric Acid.*—The object of the above combination of drugs was to dissolve the membrane, and at the same time supply such an antiseptic as would not interfere with the action of the papaïn. The formula used was:—Papaïn, ʒij.; hydronaphthol, g. iij.; acid. hydrochlor. dil. ♏xv.; aq. ad ℥iv. The solubility of the papaïn would be increased by the addition of four drachms of glycerine. It should be prepared fresh every twelve hours. The treatment is suggested only for the period before general infection has taken place. The proper administration of the spray is the work of three persons. One holds the child in a semi-prone position, another depresses the posterior portion of the tongue, and the third uses the hand atomiser for a few seconds. The spraying should be repeated every half hour until the temperature is reduced and the breathing easy. The author has tried this treatment on seven cases. One of these died. He was, however, cyanosed, and had cold extremities when first seen. Three were mild cases, and would most likely have recovered under ordinary careful treatment. The remaining three cases were all severely affected, but made good recoveries within five or six days. The temperature fell rapidly after the spray began to be used. The author thinks that the papaïn swallowed had also a favourable effect upon the digestion of the child's nourishment.

1742. *Nelson on the Etiology of Diphtheria.*—The author, after referring to the bibliography of the disease, and alluding to his paper on the same subject, read before the meeting at the International Medical Congress at Copenhagen, states that in November 1883 he assisted at an operation for tracheotomy upon a child 3 years of age. The pseudo-membrane covered both tonsils, and, before the tube was introduced, a complete membranous cast of the trachea was removed through the opening. Soon after the operation, the author inoculated one of his culture bulbs with a small portion of the membrane. Four days afterwards the liquid in the bulb, kept at a temperature of 70° F., became turbid, and, on being examined with a microscope magnifying 1,000 diameters, exhibited immense quantities of micrococci, identical with those seen in the fresh membrane. Ten generations were cultivated from these. From the sixth generation four guinea-pigs were inoculated in the cornea. One of these died of blood-poisoning 36 hours afterwards, the other three developed a membrane on the cornea. Two of them were killed on the third day, and micrococci were found in the hardened cornea and also in the aqueous humour. Further, the author contracted the disease himself without any other exposure to it. It followed a slow and severe course, and affected the uvula and the tonsils.

Ralph W. Leftwich, M.D.

1743. *Fourrier on the Treatment of 'Thrush' by Saccharine.*—The antiseptic properties of saccharine suggested the idea of trying it in the treatment of thrush, an affection recognised to be due to the presence of a fungus (*oïdium albicans*). The clinical results fully justified the experiment, and in twelve cases of thrush following on measles the milky patches disappeared in from twenty-four to thirty-six hours. In only two cases did they last as long as three days, and in these the painting of the mouth with the solution does not seem to have been properly carried out. The author uses a solution containing one part of saccharine in fifty of alcohol. A teaspoonful of the solution is put into half a glass of water, and the mouth is swabbed out with this five or six times a day. He points out that a stronger solution would be dangerous because it is irritating to the mucous membrane.

1744. *Tordeus on Whooping-cough.*—After a brief *résumé* of the signs and symptoms of pertussis at its different stages, the author takes up the question of treatment. He disbelieves in the efficacy of vaccination, and the use of belladonna for the purpose of checking its development, and insists upon the necessity for isolating the sufferers, with subsequent disinfection. In the catarrhal stage he recommends expectorants in an alkaline vehicle (℞ inf. ipecac., 5 to 15 drops; sodii bicarb., 15 to 30 grains; aqua lauro-cerasi, 15 to 30 minims; syr. Tolu, ʒvj.; aquæ ad ℥iij.: a dessert-spoonful every two hours). Later on, bactericides are indicated—carbolic, salicylic, or benzoic acid; quinine or resorcin. He speaks very highly at this period of the value of inhalations of benzoate of soda (50 to 80 grains in four ounces of water), repeated several times daily. If the attacks of cough are very severe, he suggests oxide of zinc, the bromides, hyoscyamus, cocaine, antipyrine, or chloral (℞ ext. bellad., 2 grains; ext. hyoscy., 3 grains; syr. Tolu, ʒiij.: two or three teaspoonfuls daily. Or, ℞ pot. brom., 3 grains; zinci oxyd., half a grain; sacchari q.s. Fiat pulv.: four or five times daily). In case of insomnia he advises chloral. In the period of decline he gives chloride of ammonium; or Senega, with ipecacuanha and liquorice. Should broncho-pneumonia supervene as a complication, he prefers carbonate of ammonia in syrup of Tolu. Anæmia and debility are treated by the exhibition of cod-liver oil, ferruginous tonics, quinine, arsenic, and a liberal dietary.

Alfred S. Gubb.

Dr. Henry Bennet having quite recovered from the serious illness with which he was seized three years ago, has retired from active practice at Mentone, and assumed a purely consultant position. He has built for his retirement on his Grimaldi property a mediæval Florentine villa, situated on the Mentone frontier, but in Italy.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1745. ZIEHL, DR. F. (Lübeck).—*Zur Methodik der galvanischen Behandlung schwerer Trigeminus-neuralgien* (On the practical application of galvanism in severe neuralgia of the fifth nerve). (*Berliner klin. Wochensch.*, March 25, 1889.)

1746. THOMSEN, R.—*Zur Casuistik und Klinik der traumatischen und Reflexpyschosen* (A statistical and clinical contribution to the study of reflex psychoses). (*Centralbl. f. d. med. Wissensch.*, No. 12, 1889.)

1747. GAUBE.—*Ptomaines et vertiges de l'estomac.* (*Ibid.*)

1748. SAUNDBY, R.—Suspension in the Treatment of Locomotor Ataxy. (*Ibid.*)

1749. WATTEVILLE, A. DE.—Suspension in the Treatment of Locomotor Ataxy. (*Ibid.*)

1750. ABADIE ET DESNOS.—Suspension in the Treatment of Locomotor Ataxy. (*Ibid.*)

1751. KOCH, PAUL.—Chorea Minor. (*Berliner klin. Wochensch.*, March 25, 1889.)

1752. FLECHSIG.—*Demonstration von Präparaten aus dem Gehirn Choreatischer* (Demonstration of preparations from brains of Chorea patients). (*Ibid.*)

1753. MENDEL.—*Chorea mit eigenthümlicher Complication* (A peculiar complication of Chorea). (*Ibid.*)

1754. HUBER.—Hereditary Chorea of Adults (Huntington's Chorea). (*Ibid.*)

1755. HOFFMANN, J.—On Hereditary Chorea (*Aus der med. Klinik des Prof. Erb in Heidelberg.* (*Ibid.*)

1756. LEGROUX.—*Schnelle Heilung der Chorea durch Antipyrin* (Rapid cure of Chorea by antipyrin). (*Ibid.*)

1757. CORNING (New York).—The Treatment of Chorea by Cerebral Rest. (*Ibid.*)

1758. ANDRÉE AND KNOBLAUCH.—*Ueber einen Fall von Hystero-Epilepsie bei einen Manne* (On a case of hystero-epilepsy in a man). (*Berliner klin. Wochensch.*, No. 10, 1889.)

1759. REY.—On a Case of General Paralysis without Characteristic Lesions. (*Annales Médico-Psychologiques*, March 1889.)

ART. 1745.—*Ziehl on the Galvanic Treatment of Trigeminal Neuralgia.*—The author begins by quoting Erb on the powerlessness of galvanism to effect relief in some severe cases of tic, which often go on for years uninfluenced by treatment, and then narrates an interesting case of the kind, in which a permanent cure was brought about, after all other kinds of treatment had failed, by the continuous current applied for as long as an hour at a time. The electrodes had each 25 square centimètres of surface, and were applied one each side the head (the anode being on the painful side), so that the Gasserian ganglion was between them. The strength of current was about $1\frac{1}{4}$ milliampères, the current-thickness in C. W. Müller's phraseology being about $\frac{1}{20}$. But, whereas Müller electrifies for about a minute, the current was applied in the above case for a whole hour at a time. Whereas shorter sittings, though some lasted thirty minutes, had failed entirely to give relief, the above treatment made the attacks milder and fewer gradually till they ceased altogether after eight sittings. Fifteen months have elapsed without any recurrence. The author was at first rather uneasy about the possible effects on the brain of such a long application of the current, but is now more confident on the subject. Ziemssen has already recommended thirty minutes. These neuralgias are extremely capricious in their behaviour, both as regards the faradic and the constant current, and this case teaches us not to give up electricity too soon in treating such, but to vary it. The faradic brush had previously given ease, but only for four months, and it had no effect at all when the pains recurred. The patient had been driven almost mad by pain, and even had ideas of suicide.

1746. *Thomsen on Traumatic and Reflex Psychoses.*—Four interesting cases are reported of various reflex psychoses after injuries. The first patient had delusions of persecution, and the hallucinations were only on one side of the body. The man said that he only heard the voice with the left ear—*i.e.* on the injured side. The field of vision was concentrically diminished, but there were no other derangements of sensibility, and this isolated symptom is very rare. In the second case, in consequence of cranial concussion in a railway accident, a severe psychosis set in, lasting several days, and having the character of traumatic delirium. In this the nervous derangements which afterwards persisted, especially the anæsthesia of the skin and special sense-organs, was made out from the first day. This case the author calls a 'railway-brain' case, and regards the continued derangement of sensibility from the first as very important. In the third case the patient was a hereditarily predisposed but otherwise healthy man, who, fourteen years after a shot-wound of the arm which had not affected any nerve-trunk, began to have pains in the limb and then hallucinatory attacks, brought on regularly by pains in the cicatrix. These attacks increased to perfect confusion of the intellect each time; in the intervals the patient's mind was unaffected. During the period of an attack there existed on the right side—the side of the injured arm—hemianæsthesia of the skin and special sense-organs, also left-sided dumbness; moreover, in severe attacks double achromatopsia for blue and green. Towards the end of each period the hemianæsthesia disappeared, the visual fields became normal, and the hearing was equal on both sides. Four days after excision of the cicatrix there occurred one attack which lasted twenty-four hours, then all disturbance ceased, and had not reappeared at the date of the paper several months after the operation. In the fourth case also excision of a cicatrix was made, on account of epileptic attacks after an injury to the hand; they were mainly one-sided, and could be induced by pressure on the cicatrix. Directly after the operation the patient was feverish, stupid, and disturbed in speech; and fourteen days afterwards he showed nightly stupidity and amnesia with temporary delusions of persecution, which ceased after another week. At this time also disappeared a concentric limitation of the visual field, which had been found in the time of the epileptic fits. At the end of the paper the various anæsthesias are minutely discussed. (See *Charité-Annalen*, No. 13, 1888.)

1747. *Gaube on Ptomaines and Vertigo à Stomacho Læso.*—The author's paper on this subject is in the *Gazette Méd. de Paris*, No. 41, 1888. The following is a summary:—This vertigo depends on an auto-infection; the poison causing the latter is a ptomaine to be found in the urine and fæces of individuals with deranged digestion. This poison is basic and uncrystallisable, and possesses all the properties of the alkaloids, forming with HCl crystallisable salts. Its poisonous properties are very pronounced, as shown by a number of experiments on rabbits. The animals displayed all the reflex symptoms which exist in human beings in consequence of the above kind of vertigo.

1748. *Saundby on Suspension in the Treatment of Locomotor Ataxy.*—The author has treated three cases of locomotor ataxy by this method. One patient, who was suspended twenty-one times for about two minutes and more, showed distinct improvement. The others had not been long enough under treatment at the time of writing to allow a proper opinion to be formed. None of the patients were injured by the proceeding.

1749. *Watteville on the Treatment by Suspension of Locomotor Ataxy and some other Spinal Affections.*—Dr. de Watteville has translated the publications on the subject emanating from Professor Charcot's clinic (London: David Stott. 1889), for hospital use chiefly. He has, moreover, in his own application of the method, attached a weighing apparatus to the Sayre's suspension tripod, by which not only is the patient's weight known, but his suspension and the letting down again are effected more gradually than by the use of the pulley.

1750. *Abadie and Desnos on Suspension in the Treatment of Locomotor Ataxy.*—In the discussion on a paper by Trousseau on 'The Eye in Tabes Dorsalis,' the authors stated that the treatment of locomotor ataxy by suspension had given encouraging results as regards improvement of vision. Other functional derangements had also been influenced decidedly for good. [Dr. Berkhardt, who reports the above three communications in the *Centralbl. für die med. Wiss.*, No. 12, 1889, adds that his own trials of the new mode of treatment are so far satisfactory as to impel and encourage him to further use of it.]

1751. *Koch on Chorea Minor.*—Dr. Koch's researches were made amongst the in and out patients of the Leipsig hospital, and show that females are more affected than males, in the proportion of 62·54 : 37·4 per cent. This is less than the proportion given by English and French observers. Of the 266 patients, 62 per cent. were between 7 and 13 years old, and 6 per cent. were between 21 and 52 years old. As to season of year, there were far more cases in winter than in summer. Heredity was carefully inquired into in 113 cases; of these, 79 per cent. showed entire absence of a neuropathic disposition in the parents, grandparents, &c., and only 8 per cent. showed distinct heredity. The cause was examined in 155 cases; of these a definite cause could be assigned in 66—namely, emotional causes 25, rheumatism 21. Three cases of chorea gravidarum ended in cure, two were cases of relapse. In the symptomatology, Koch attaches very little importance to the presence of painful spots, the sensibility of the tongue to galvanism, and of the lower part of the abdomen to pressure. The tendon-reflexes were seldom much altered. The mind was often slightly disturbed, but never severely, except in one case, when severe melancholy set in. Fifty-four cases (mostly severe) were treated in hospital; of these four died. Of the whole 266 patients only 9 were severely affected, chiefly females after the age of puberty. In all four fatal cases endocarditis was present. As to duration, 6 per cent. lasted more than a year, and as to acute and chronic articular rheumatism a relation was made out in 17 per cent. of the cases; valvular disease was present in 13 per cent. Dr. Koch assumes that 'in genuine chorea the pyramidal path is affected by some infectious material, possibly related to the virus of polyarthritis.' Osler, of Philadelphia, after a study of 410 cases, found that female cases predominated. Spring was the chief season for the disease. Shock was assigned as the cause in 18·5 per cent. of the cases; previous rheumatism existed in 15 per cent. Seven of the cases lasted more than a year; 170 were second attacks. The report of the Collective Investigation Committee of the British Medical Association in 1887 showed that 43 per cent. were affected in the third, 34 per cent. in the second lustrum. In 439 cases acute rheumatism had existed in 116, undefined and chronic rheumatism in 63, scarlatina in 129, measles in 116. In over a fourth of the cases shock was assigned as the cause, and overstudy in a sixth.

1752. *Flechsig on Cerebral Alterations found in Two Cases of Chorea.*—In four cases of pernicious chorea, combined with acute delirium, in patients between 18 and 22 years old, the author found only the globus pallidus of the lenticular nucleus affected, on both sides of the brain. In the lymph-sheaths of the vessels, chiefly the capillaries, were found roundish bodies, the structure of which was disposed in layers, in some respects corresponding chemically to Recklinghausen's hyaline.

1753. *Mendel on a Peculiar Complication of Chorea.*—Two brothers, aged 13 and 12 years, showed choreatic movements of the face, tongue, hands, and legs, increased knee-jerks, and pronounced optic atrophy. One patient was decidedly weak-minded.

1754. *Huber on Hereditary Chorea of Adults (Huntington's Chorea).*—This chorea is always hereditary, begins usually in the fourth decade of life, increases to a very high degree, is mostly associated with mental derangement, and goes on till death. Of Huber's two cases, the man was 30 years old when first affected. The father, grandfather, and great-grandfather had been, and the sister was then, similarly affected, the latter apparently 36 years old. In both cases the movements were widespread (over the body), they abated during muscular exertion, and ceased altogether in sleep.

1755. *Hoffmann on Huntington's Chorea.*—Five cases of this disease were studied in Professor Erb's wards in Heidelberg. Three brothers and a female cousin were affected; also a Heidelberg man long under observation. The disease had shown itself for several generations in the family of the brothers, and had appeared in some as early as school life. The disease begins gradually, and the mind is always affected, at first insidiously, but the change goes on (often with occasional excitement) to imbecility. The movements affect chiefly the face, and are stronger on one side than the other; they usually cease during sleep. The Heidelberg man belongs to a family free from chorea, but his mother had epilepsy at the age of 39, and two sisters had epilepsy after 25 years of age, and soon died, so that heredity was plainly present. In Zacher's case (*Neurolog. Centralbl.*, 1888, No. 34) the patient's family was affected for several generations. Both sisters and a grandfather still suffer; in all, the disease first appeared soon after the age of forty. Lannois (*Revue de Médecine*, 1888, No. 8) gives the family history of a patient. The great-grandfather, five of his children, eleven grandchildren, and two (still young) great-grandchildren were all affected. It is to be remarked that several children of the original progenitor and also their descendants remained quite free form the disease.

1756. *Legroux on Rapid Cure of Chorea by Antipyrin.*—Legroux considers that antipyrin in doses of fifteen grains three times a day is the most effectual remedy in chorea. He thus cured six cases within a month. Grün (*Centralbl. für Nervenheilk.*, 148) and Lilienfeld (*Centralbl. für die med. Wissensch.*, 1888, 784) also report on the good effect of this drug.

1757. *Corning on the Treatment of Chorea by Cerebral Rest.*—Not only is all intellectual effort proscribed, but even the irritation of light and sound is reduced to a minimum. Arsenic is given later on.

1758. *Andrée and Knoblauch on a Case of Hystero-Epilepsy in a Man.*—The patient was a soldier, aged 23, brought into the garrison hospital in Carlsruhe on March 4, 1888, on account of severe convulsions. He had taken part in a long funeral ceremony a day or two before, and had stood a long time on guard; his previous health was good. He was unconscious on admission, but soon had a convulsive attack lasting four minutes, followed by several more during the day. During the next few days there were from six to nine attacks daily, fully corresponding to the typical attack of grand-hysteria, minutely described by Charcot and Richter. Instantaneous photography was employed in this case, and a series of photographic drawings accompanies the original article. Each long attack was made up of several shorter ones, each complete in itself, and consisting of three periods—namely, the epileptiform period, lasting forty to fifty seconds, and followed by relaxation lasting ten to thirty seconds, the period of violent movements lasting for a minute or a minute and a half, and the period of expressive (passionate) attitudes lasting about two minutes. After a pause of from ten to forty seconds, the next attack began. During the first period (convulsive), which began with perfect loss of consciousness, there was at first general tonic muscular contraction of very short duration, followed by severe clonic convulsions of all the muscles of the body. The eyelids were half shut, and the eyes showed lateral rotations. The cutaneous and tendon-reflexes were, so far as could be made out, lowered or lost, the pupils were dilated to the maximum, and did not react in the least to light. There was no loss of control over the sphincters, nor ejaculation of semen, nor biting of the tongue. This part of the attack differed in nothing from true epilepsy, except that the patient, if loudly shouted to, regained consciousness at this stage, though without any remembrance of what had just happened. After a short period of rest the patient, when not interfered with, fell into the second phase, called by Charcot the 'period of extensive movements and contortions,' otherwise 'clownism.' The movements were violent and difficult to describe; the man struck his forehead and chest with his fists, twisted the trunk about and jerked it here and there, alternately flexed his legs and thighs and kicked out violently. 'Mouvements de salutation' were observed, also the 'arc de cercle.' The latter was sometimes concave upwards (emprosthotonous), only the sacral and lower lumbar regions touching the bed, sometimes in the opposite direction (opisthotonous). The eyes in this (second) period were usually open; the pupils were dilated, and promptly reacted to light and accommodation. The third period, that of 'expressionful, passionate positions and demeanours' followed the second gradually, and was not so sharply contrasted to it as the second period was to the first. Here the facial expression, disposition of the limbs, and movements followed the character of the passing hallucinations, mostly belonging to his military life. He struggled with an enemy or went through his bayonet exercises. The close of the attack was almost always marked by the classic crucifixion attitude of Charcot. Here, also, the eyes were open, and the pupils reacted normally. As before said, a series of such attacks usually followed close on each other, usually from three to six. On one occasion three such attacks occupied thirteen minutes. Regarding the general condition, there was moderate polyuria the first week. Accurate examination of the field of vision was impossible; the patient seemed utterly unable to fix a point for more than a moment or two. The cutaneous sensibility was equally difficult to make out. The slightest pressure on the right nipple at once caused the hysterical aura and further irritation, or drawing the finger upwards to the neck caused a severe attack. Pressure of a testicle, or over the inguinal region, temporarily suspended an attack in progress. The patient gradually lost the attacks in hospital, and was discharged cured, but left the service, and has lately reported their occasional recurrence.

E. J. Edwardes, M.D.

1759. *Rey on a Case of General Paralysis without Characteristic Lesions.*—In the *Annales Médico-Psychologiques* for March 1889, Dr. P. A. Rey describes a patient who presented the symptoms of general paralysis during life without any trace of this profound disease being detected after death. The patient who was a wine merchant, fifty-five years of age, entered the asylum of Ville-Evrard on July 7, 1882, with the following certificates:—July 1, 1882. Maniacal delirium, violent, intellectual excitement, ideas very confused, incoherent talk, sleeplessness, incapacity for work, extravagance, probable drunken habits. July 2. Slight intellectual weakness with excitement, confused ideas of persecution, contusions on the arms. The certificate, on entrance, notes principally the insanity and loss of memory. On admission the patient was placed in the infirmary, being troubled with dyspnœa. On auscultation sonorous and sibilant râles were heard all over the chest. The sounds of the heart were distant and heard with difficulty. The pulse was feeble, the radial artery hard and tortuous. No fever. There was noticed trembling of the tongue and hands; inequality of the pupils, the right being a little the larger. The speech was interrupted; no appreciable difficulty in articulation. The patient had no recollection of the attack which caused his admission. He had no idea of the time since he had left his home. He was doubtful of the month and year, and had a very incomplete idea of his affairs. The patient's family had been very unwilling to furnish information, but his neighbours reported that he had been riotous and drunken for some time. For about three months it was noticed that he spat blood. A little before his confinement he became extravagant, neglected his occupation, then he became violent, and smashed the crockery. After his admission the patient became somewhat excited, he complained without reason that no one cared for him, that he was refused food, and that he was made miserable. The rest of his complaints were a little incoherent; at other times he was very well pleased and recognised the good care which he had received, and promised large rewards. The observations taken on the 15th, by M. Guyard, noted particularly the ideas of riches and grandeur; the patient said that he loved all the world, that he was prince of Europe, and that he had millions of money, which he had gained in fifteen days. It was in his periods of calm, that the patient showed himself more expansive, and gave forth his dreams of fortune and his grandiose plans. At night he slept little, sometimes none at all. During his sleeplessness he never stopped speaking, and it was found necessary to isolate him from other patients whom he disturbed. The dyspnœa was persistent; the treatment employed, sedatives, kermés, and digitalis; bromide of potassium, with a special diet, was without effect. On July 29, an attack of suffocation caused the patient's death. The autopsy was made on the morning of the 31st, by MM. Guyard and Manières, the internes; on the posterior surface of the frontal lobe of the brain on each side of the middle line, there were several rugose vegetations with adhesion of the dura mater. This membrane was sound in the remainder of its extent. The arachnoid showed a slight opalescent tint in the course of the vessels; at other points it was quite transparent. There was not the least adhesion of the pia mater with the cortical layer. The colouring, the thickness, and the consistence of the grey matter of the brain were normal; no granulations in the lateral ventricles; none in the fourth ventricle. On cutting, there was only to be found a slight softening of the medullary matter forming the walls of the cavities. Nothing in the cerebellum nor in the medulla; the arteries of the base were atheromatous. Weight of the brain with the meninges, 1,370 grammes, of the cerebellum and medulla, 177 grammes. The lungs were found to be covered with fibrinous clots; the tissue being much indurated. The aorta and valves were in an advanced state of atheroma, and there were two perforations which had followed atheromatous ulceration. The heart was large and fatty. It weighed 410 grammes. The liver weighed 1,360 grammes, and was granulose; the spleen, hypertrophied, weighing 490 grammes. The kidneys were normal.

W. W. IRELAND, M.D.

REVIEWS.

ARTICLE 1760.

A Text-book of Pathology, Systematic and Practical. By D. J. HAMILTON, M.B., F.R.C.S.E., F.R.S.E. Vol. I. London: Macmillan & Co. 1889.

THE handsome volume before us, containing between seven and eight hundred pages, and adorned with 225 illustrations, mostly original, is the first part of what promises to become one of the leading textbooks on Pathology in the British tongue. We may say at once that it gives evidence of the greatest pains and research on the part of its author, and that its production does equal credit to its publisher.

The first part is devoted to Technology, and contains full instructions for the performance of *post mortem* examinations, a subject to which, it may at least be said, not too much attention is devoted in our hospitals and schools of medicine. Following upon this are directions for the preparation of permanent museum specimens and of microscopic sections. The microscope itself is then fully dealt with, directions being given as to the choice of an instrument and descriptions of the chief accessories.

Practical bacteriology receives, as might be expected in books so thoroughly up to date, a large share of attention, two copiously illustrated chapters being devoted to its consideration.

Part II. treats of General Pathological Processes. Amongst the first of the infiltrations dealt with is amyloid degeneration, which we mention to give an idea of the way in which the illustrations have been freely used where likely to be of use. This section alone has six coloured figures, beautifully produced, allotted to it, viz., liver unstained examined in water, the same stained with iodine and viewed by direct and by transmitted light, treated again with iodine and sulphuric acid, and with methyl-aniline, and finally the artificial wax-like substance in the spinal cord stained with the same re-agent. The subject of inflammation dealt with next after the infiltrations and degenerations affords a good example of the original manner in which, as might have been expected from his former writings, Professor Hamilton treats his subjects. Thus we have a section giving an account of experiments on the circulation of bodies through large tubes with application of the facts observed to the animal circulation, then a second series of experiments on the circulation of bodies through capillary tubes with further applications and general conclusions from all the facts considered together. After these follows an account of vascular phenomena, with directions for their study in cold and warm blooded animals. Upon this follows a description of the vascular phenomena of inflammation, which leads to the changes which take place in the fixed tissues, considered individually. This sketch of the method of treatment of one subject will show our readers with what care and completeness the various problems under consideration are dealt with. It may here be convenient to mention that at the end of each section or chapter there is a bibliography of recent papers and books which will be of much value to those desirous of pursuing their investigations further into any particular subject.

Part III. deals with diseases of various tissues and organs, and commences with an account of the structure of cells and their reproduction which leads us to the new formation and tumours. A new formation is defined as 'the excessive production some tissue naturally existing in the body duri fœtal or adult life, either locally where such tiss is normally present, or in some part of which it not an actual constituent.' Each neoplasm has al its definition, from which we quote the following:- 'A sarcoma is a tumour composed of an embryon connective tissue which shows no inclination to ful its ultimate developmental intention;' and that carcinoma, 'a neoplasm formed of any tissue who fibrous interspaces and lymphatic vessels are i filtrated with actively proliferating epithelial cells Before leaving this part we may express a regret th the author has only devoted two and a half lines t the interesting group of odontomata, and ha accorded so scant a notice to the cysts. Among tumours due to the presence of a specific vegetab micro-organism, tubercle of course receives the lion share of attention, the section including an accou of artificial tuberculosis, of the liability of differen animals to the disease, of its contagiosity, and th means of contamination.

The blood is the next subject, and the question of its pathology is preceded by an account of its general characters, &c., under normal conditions, methods of examination being detailed at length. The sources of the blood-corpuscles are also described. In the course of this part of his book the author incidentally deals with venesection in disease, which he considers to be, even in some forms of pneumonia, a good remedy gone out of fashion. Under the sub-heading of 'Circumstances under which Venesection is Calculated to Afford Relief,' he says—'These may be summed up in one expression—*high arterial tension.* Venesection should not be resorted to in all cases where high arterial tension is present, but where high arterial tension is endangering life, as in acute pneumonia, blood-letting is one of the readiest means of reducing it.'

Besides the more ordinary subjects dealt with under the pathology of the blood, we may mention those of diabetes and acetonæmia with rheumatism and gout.

The blood is naturally followed by diseases of the pericardium, heart, and blood-vessels, with which is considered the pulse.

A short appendix describes the methods of making casts and models, and the volume ends with a list of books to which reference is made in the text.

This review has, already, on account of the importance of its subject, reached to such length that we cannot now say more than that every pathologist or pathological student will find it imperative to place this valuable work upon the shelves of his library.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1761.

The Early Symptoms and the Early Treatment of Osteo-arthritis, with Special Reference to the Bath Thermal Waters. By JOHN KENT SPENDER, M.D.Lond. London: H. K. Lewis, 136 Gower Street.

RHEUMATOID arthritis has proved so intractable a malady that any addition to our knowledge of treating it must prove a source of gratification. The little work before us has, besides the merit of being brief, the advantage of being based on clinical observation of over a thousand cases. To the general practitioner or hospital physician this is an experience they can scarcely hope to equal, and it is only at a health-resort, such as Bath, where special climatic advantages are afforded, that rapid generalisations can be made with any approach to scientific accuracy. The author very properly dwells upon the importance of recognising the disease in its earlier forms, as in its later stages fewer remedial measures are available. He divides the disease into 'slow' and 'quick' varieties, but does not draw a distinction between them except in the mere question of chronicity. Amongst the early symptoms we are told to watch for increased velocity and tension of heart's action. The pulse gradually rises to 120, in the rate of which there is no variety during night or day. The body is non-pyrexial; the hands icy purple; and there is no hæmic murmur to be discovered. He describes the heart as apparently running without check as if the inhibitory power of the pneumogastric were partially withdrawn or neutralised by cerebral influence. Dr. Spender further describes, among initial symptoms, a disturbance in the chromatogeneous function of the skin. The pigmentation assumes many hues, from a light bronze smear across the forehead and a deeper one over the temporal fossæ to a dark metallic lustre under both eyes. The predominating tints on the face are lemon, orange, and citron. Amongst neurotic phenomena the author mentions transient areas like bruises passing through similar sequences of colour. Briefly, the law is laid that if one notices recurring attacks of rheumatic pyrexia leaving behind them a quick pulse, smears or spots of pigment, and certain neurotic and vaso-motor symptoms, osteo-arthritis may be certainly diagnosed.

With regard to treatment, laws equally explicit are laid down. A ring of iodine above and below the rheumatoidal knee. Partial rest for the articulation is advised, with a caution against too long confinement. Massage, electricity, and allied methods are advocated, but greatest stress of all is laid upon the Bath thermal waters. Cod-liver oil, arsenic and quinine, are the therapeutic sheet-anchors, and where neuralgic pains abound, quinine and salicin in conjunction are exhibited.

The author speaks with authority and a pleasing dogmatism, and his work deserves thoughtful perusal.

ROBERT JONES.

ARTICLE 1762.

The Insane in Foreign Countries. By WILLIAM P. LETCHWORTH, President of the New York State Board of Charities. New York and London: Putnam's Sons. 1889.

THIS is a volume in large octavo of well-nigh 400 pages, very well printed on good paper. The author has paid short visits to a number of asylums in England, Scotland, and Ireland, France, Germany, Belgium, and Scandinavia, and gives us the result of his rapidly-formed impression in an easy and fluent style. One may look at asylums from at least two aspects, one being the scientific or psychological, the other the medical or therapeutic aspect of insanity. Once upon a time I went round a large asylum with a party of medical men, including two French physicians eminent in the treatment of nervous disease. The medical superintendent conducted his distinguished visitors through all the buildings, kitchens, sculleries—everywhere, in fact. When passing through the laundry, I heard the one Frenchman say to the other, 'Insupportable! insupportable!' but when he got to the cases and saw illustrations of nervous diseases, he looked bright and interested. Mr. Letchworth gives us the opposite side, we do not say the insupportable side, for there are some superintendents who will show you their asylum buildings and furnishings, and scarcely think of showing you their patients. It is to be understood that Mr. Letchworth is not a medical man. In his somewhat lengthened descriptions of asylums he keeps well clear of such inquiries as, Have they a low rate of mortality? or a high rate of recoveries? nor does he tell us whether increased comforts or more costly furnishings bring more patients out in their right mind and fewer into the cemetery. Our author is sufficiently occupied with the appearance of the wards, their style of furnishing, the clothes of the patients, the drainage, the stowage of refuse, and so forth. The general tone of the book is pleasant and courteous. Mr. Letchworth is obviously a gentleman who, where he has been received with civility, does not care to say anything disparaging. For this, or other reasons, there is an absence of criticism about the book, save on the question of boarding-out insane patients, on which our author is wary. He was three days at Gheel, which he considered quite sufficient to arrive at an unfavourable opinion of that once over-praised concern. Mr. Letchworth uses the old stories of the ill-treatment of lunatics in past times as a shading to the humane methods of our day. His book is illustrated with a number of engravings. One of them—the frontispiece—is from a well designed picture of Pinel at the Salpetrière getting the chains of a mad woman struck off; another, Norris, in chains; and the burning of an insane woman as a witch. These are contrasted with agreeable engravings of day-rooms and dining-rooms from Brookwood and Prestwich Asylums. On the whole, we should like to hear of some further evidence of improvement in the treatment of the insane than enumeration of reforms made by physicians of a bygone generation. In ordinary medicine and surgery practitioners take no delight in recalling the old blunders of Drs. Sangrado and Diaforius, bleedings in fevers, and leechings in consumption, mercurial salivations by the quart, and other horrors of the past. Is it wise for those who have in their hands the treatment of the insane to be perpetually recalling neglect and mismanagement which has assuredly passed away never to return? It must be remembered that the improvement in the treatment of the insane was but a part in a great humanising movement, the benefits of which were shared by our prisons, our hospitals, our barracks, and our ships, as well as by our asylums.

In his warm-hearted enthusiasm for the claims of lunatics, Mr. Letchworth has a sentence about ordinary paupers which surely requires reconsideration:—

'No statute can justly place common paupers and the insane on the same plane. The former come under public care, in the majority of cases, through improvidence or physical infirmity caused by licentious or criminal ways of life; the latter reach a condition of peculiar helplessness and dependence from mental disease, frequently the result of causes for which they are not to blame.'

Mr. Letchworth might have easily satisfied himself that many of the inmates of English asylums have led most immoral lives. Drunkenness and licentiousness are probably as common causes of insanity as of pauperism. Many of the inmates of English poor-houses are more unfortunate than blameworthy. A considerable proportion of them are simply the victims of chronic diseases, the results of accident, exposure or hard work, or they are people who have lost their relations and have never been able to save anything for old age. We are willing that both the ordinary pauper and the insane pauper should be treated with liberality; but the sane has as good a right to be considered as the insane. Here is Mr. Letchworth's opinion on a question which it is to be hoped will end some day:—

'From my observations in asylums in Great Britain and in this country, I should say that, on the whole, there was less restraint there than here, notwithstanding the fact that in many asylums in the United States it may be said to be virtually discarded. There can be no question but that the theory of non-restraint, once so thoroughly resisted, is now coming to be universally accepted; and the extent to which it has been adopted in recent years in our asylums leads to the belief that the time is not far distant when what is commonly understood as non-restraint and the open-door system will be put in practice to a greater extent in this country than it now is in Great Britain or on the Continent.

'Some who approve of the system claim that under it the number of attendants is not actually or necessarily increased; others, favouring it, concede that there must be a stronger corps of attendants, and that they must exercise greater watchfulness, but confidently assert that the benefits arising to the patient more than counterbalance the difficulties attending the carrying out of the freer system. It is claimed, further, that a quieter and more orderly administration is the result; that there is less destruction of property; that more patients are employed, and consequently there are larger industrial products.'

Perhaps the most novel and interesting chapter in the book contains the notes of a visit paid by the author to the Provincial Insane Asylum of Alt-Scherbitz, near Halle. The description is illustrated with six plans, very clearly done. Mr. Letchworth highly commends the arrangements in this institution, and much appreciates the care and tact of the physician-superintendent. His observations upon the asylums in Great Britain and Ireland are of a very friendly character. He claims for the American asylums that the dietary is generally superior both in quality and in variety.

At the end there is a *résumé* of the general results which he has arrived at. In this, as throughout the book, Mr. Letchworth shows himself a shrewd observer, very well acquainted with the construction of asylums and the necessary appliances for insane patients, and always willing to learn something new. Altogether this is a book which the superintendents of asylums as well as the managers will read with pleasure and profit. If it does not go so deep into the subject as Dr. Hack Tuke has in his well-known work on *The Insane in the United States and in Canada*, at any rate Mr. Letchworth can claim to have fully accomplished all that he has attempted. W. W. Ireland, M.D.

Article 1763.

Psycho-Therapeutics; or Treatment by Sleep and Suggestion. By C. Lloyd Tuckey, M.D. London: Baillière. 1889.

In this little book Dr. Tuckey recommends the treatment of some diseases by hypnotism. He observes: 'The system of psycho-therapeutics has so far attained its fullest development in Holland, where, in every large town, it is followed by at least one well-qualified practitioner; while in Germany, Russia, Sweden, and, indeed, every European country, its position is secured by the support of leading physicians, and by the success attending their practice.'

There is no doubt that the use of hypnotism is spreading over the Continent, although perhaps it has not taken the extension one might suppose by reading the periodicals devoted to its promulgation. Dr. Tuckey observes: 'The dangers of hypnotism have been proved chimerical; in proper hands no undesirable medical results can occur through its practice, and there is, I believe, hardly one authenticated case of its being used for a criminal purpose in the countries where it is most frequently employed by medical men.'

Perhaps Dr. Tuckey has not sufficient information on this point. About two years ago, going over some psychiatric literature, I noted that there were at least five cases on record of women violated under hypnotic influences, and I have read of at least one since. Nevertheless, I do not hold that such cases are sufficient to bar the use of this method of treatment if it can be proved to be valuable. It must be remembered that unfortunate results follow every powerful medicinal agent.

It has been repeatedly stated that harm may follow from mesmerising a patient. Nervous troubles and even insanity have been supposed to follow. This is a point of some moment, on which Dr. Tuckey might have given his opinion.

I should like much to see an extended use of hypnotism in this country, and would hope for good results in some cases.

Dr. Tuckey's first chapter, 'On the Power of the Mind over the Body,' does not impress one with the idea that he handles his instances in a severely critical spirit. He gives as an instance of apparent death being produced by auto-suggestion, the old story of the Fakir who was shut up by Runjeet Singh in a close room enclosed in a wooden box four feet by three broad. Dr. Tuckey calls it a 'sealed coffin.' After six weeks the Fakir was taken out and gradually revived by his servant till he sat up and spoke. Dr. Tuckey might have informed the reader that, according to the published account, the Fakir's nostrils were filled up with wax, and that his tongue was thrust back, obstructing the gullet. Now we ask, can a man, or any other warm-blooded animal, be kept for six weeks in such a situation without dying of asphyxia, or how could auto-suggestion or hypnotism help to keep him so that he could remain alive without respiration. Dr. Tuckey says that Braid believed this story to be thoroughly well authenticated. Knowing the great skill of Indian jugglers, I do not believe that the man was shut up all the time. It is said that the Fakir refused to allow the experiment to be repeated under European supervision. Immediately after this story comes 'the best warranted European case of the sort,' that of Colonel Townshend, as related by Dr. Cheyne, in which the colonel so successfully counterfeited death as to deceive three physicians. Dr. Tuckey omits to mention that the colonel made his will and died a few days after. On the whole, this story, which seems quite authentic, is very much less wonderful than that of the Fakir. Dr. Tuckey observes that there are 'frequent instances of medical men who have succumbed to the disease which they have made their special study—*e.g.* Professor Trousseau from cancer of the stomach.' Having often followed Trousseau in his visits to the Hôtel Dieu, I know that his powerful and active mind was always running through the whole range of medicine, and, if he made special studies, it was never for very long.

Dr. Tuckey then gives a short description of somnambulism, after which we have three chapters upon hypnotism and the different diseases which might be benefited by its employment. Amongst these are all the neuralgias and hysterias, amenorrhœa, partial hemiplegia, megrim, dyspepsia, and rheumatism. The cases he reproduces are principally from French sources, and are some of them very startling. Take the following:—'Another child, 7 years of age, so obtuse as to be almost an idiot, was so benefited by suggestion that in three months he could read, write, and do the first four rules of arithmetic.'

Dr. Tuckey belongs to the school which traces everything to the force of suggestion. He quotes Bernheim's definition of hypnotism as the production of a psychical condition in which the faculty of receiving impressions by suggestion is greatly increased. The same physician has well said, *Méfiez-vous de la suggestion*, or, in English, 'Take care or you'll find what you are looking for.' There is another school which insists that suggestion cannot explain half the wonders of animal magnetism. They maintain the existence of an imponderable fluid through which the operator acts on his subject.

Dr. Tuckey's little book is likely to be useful as giving a *résumé* of what is being done on the Continent about hypnotism. We hope to see later on a collection of cases treated under this method which have come under his own observation.

W. W. Ireland, M.D.

Article 1764.

A Text-book of Midwifery. By the late Otto Spiegelberg. Translated by J. B. Hurry, M.A., M.D. Vol. II. London: The New Sydenham Society. 1888.

This volume includes the continuation of Part III., consisting of the Pathology of Labour, and the Puerperal State, and the whole of Part IV. on Obstetrical Operations.

Speaking of uterine inertia, the author considers that it can only be satisfactorily treated when its cause has been clearly diagnosed, and that it is not always easy to arrive at a diagnosis. He goes on to say, 'I cannot too strongly advise the practitioner to be as sceptical and sparing of remedies as possible, and above all to seek to unravel the origin of each real or apparent abnormality of the expulsive forces.'

Ergot is said to be more certain in strengthening pains than in provoking them. Recent observations tend to confirm this statement made years ago.

Considerable space is allotted to Deformities of the Pelvis. Contracted pelves are divided into two classes. The first has the usual proportions, but on a reduced scale, while the second includes all those in which the relation of the several diameters is disturbed. Pre-eminence is given to three varieties, viz., the ordinary flat, or antero-posteriorly contracted pelvis, the generally contracted pelvis, and that produced by a combination of these two. Every practitioner is strongly recommended to explore the pelvis whenever he examines a pregnant woman, in order to gain experience and practice in pelvimetry.

Under the heading of Anomalies of the Sexual Organs is discussed the obstruction to labour caused by uterine myomata. Great stress is laid upon the importance of trying to push up above the brim any tumours which project into the pelvic cavity. The author states: 'Indeed, it is a proceeding which has frequently rendered unnecessary a Cæsarean section which had been previously decided upon.' When obstruction is due to the presence of an ovarian tumour during labour, the same treatment is advised. 'If reposition is impossible, the tumour must, if cystic, be punctured.' When both these procedures fail, the author considers version or craniotomy preferable to ovariotomy, an opinion which may be open to question now that the mortality from this operation is so low.

The chapter on Puerperal Fever is well handled, but is in some respects behind the advanced thinkers of the day, although far in advance of many pathologists. A distinct line is drawn between putrefactive germs and the septic virus, the true nature of which the author considers is quite unknown, 'although everything combines to point out the spherical bacterium as the true carrier of the poison.' It is not a specific virus, but may be derived from a variety of sources. For the induction of premature labour, Kirvisch's method by warm vaginal douches is preferred, as being the least objectionable. The author finds it free from danger. On the other hand it acts slowly, and is sometimes inoperative.

Passing on to Cæsarean section, we find an emphatic insistance on the necessity of closing the opening in the uterus by deep and superficial sutures. Carbolised silk or wire is preferred to other materials, while catgut is absolutely condemned, because the rhythmical after-pains loosen and even undo the knots. Comparing this operation with Porro's, the author considers that the latter has an undoubted advantage over the earlier method in so far as it involves less risk to the mother.

J. Inglis Parsons, M.D.

Article 1765.

Exploration of the Chest in Health and Disease. By Stephen Smith Burt, M.D. (New York.) London: H. K. Lewis. 1889. Pp. 205.

So many manuals have been produced for the guidance of students and others in this subject that at first sight it would appear as if this work were an unnecessary addition to their number. On perusal, however, the reader will at once discover that it is written in a somewhat more independent and confident tone than most of its predecessors, and that it deals with the subject in a spirit of common sense untrammelled by traditions of clinical theories in the past. The author evidently determined that he would teach nothing that he had not thoroughly grasped for himself, and hence there is a refreshing absence throughout the book of vague or general terms or description. He knows exactly what he means, and he contrives that his readers shall clearly comprehend his meaning also. The methods of physical examination and the instruments employed therein are shortly described, and a few sound practical hints given as to their use. Amongst them the clinical thermometer finds a place as the instrument of 'calormetation.' The microscope and the examination of sputa are only lightly touched upon, but it would add greatly to the usefulness of the work if this part were a little further expanded in a future edition, since the examination of sputa is becoming daily more and more employed as a means of diagnosis. Some practical hints as to the use of the laryngoscope also would be welcome as an adjunct to the complete investigation of diseases of the air-passages. In his description of abnormal physical signs and their interpretation Dr. Burt gives admirable advice, and the choice of descriptive terms is based on sound reasoning. It is satisfactory to note that he banishes the senseless and misleading term 'moist sound' from his vocabulary, and that he recognises, in common with all recent writers, that the tracheal sound is the true standard of bronchial breathing. The least satisfactory part of his work is that relating to dilatation and fatty degeneration of the heart, but the work as a whole, illustrated as it is by good reproductions of standard anatomical drawings and photographs and some useful woodcuts, may be cordially recommended as a trustworthy and practical guide to the study of the physical conditions of the chest in health and disease.

E. Clifford Beale, M.B.

Article 1766.

The Essentials of the Physical Diagnosis of the Chest and Abdomen. By J. Wallace Anderson, M.D., Physician to the Royal Infirmary, Glasgow, and Lecturer on Medicine, Royal Infirmary Medical School. Pp. 156. Small 8vo. Glasgow: James Maclehose & Sons. 1889.

This short work was written, the author informs us in the preface, because of a difficulty he had experienced in finding a suitable book upon Physical Diagnosis to recommend to junior students. Such a difficulty, however, we altogether fail to understand, as there are several books upon the subject which might be mentioned intended especially for junior students, and as larger books we need only instance those of Gee and Guttmann. There is, it must be confessed, an unwillingness on the part of hospital physicians to adopt as a text-book any but one teaching exactly their own views on the subject of physical diagnosis. This tendency is natural, and certainly is most easily met by writing a book to teach one's own views. Dr. Anderson's venture in this direction is without doubt successful. His book is a clear and concise, if elementary, exposition of a well-worn subject. The arrangement adopted is that most usually found elsewhere. The Examination of the Lungs in Health and Disease is first treated of by the four methods, Inspection, Palpation and Mensuration, Percussion and Auscultation, a special paragraph being devoted to Succussion; next follows the Physical Examination of the Heart in Health and Disease, and the remaining twenty-nine pages are devoted to the Physical Examination of the Abdomen and to a short appendix on Case Reporting. Those who read the book will find that all of the subjects are treated of in a careful and methodical way, but on examining the book critically we are obliged to confess that we have been unable to find in it any differences distinguishing it from those previously published, sufficiently well marked to prove the utility of a new work upon Physical Diagnosis for general circulation.

Vincent D. Harris, M.D.

Article 1767.

The Bacteria in Asiatic Cholera. By E. Klein, M.D., F.R.S., Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital; Professor of Bacteriology at the College of State Medicine, London. Pp. 179, with 40 figures in the text. London: Macmillan & Co. 1889.

In this volume Dr. Klein has collected together his papers on the etiology of Asiatic cholera which were contributed to the *Practitioner* from October 1886 to May 1887, and has, in addition, incorporated the results of the latest researches which have been made upon the subject of the comma-bacillus of Koch and its relations to the disease in question. Thus, the book must be considered as highly important, since it not only epitomises the work which has been done in the study of the micro-organisms in Asiatic cholera, but it also defines the author's position with regard to the rôle of these micro-organisms. In the Introduction and in the first chapter, Koch's observations are given, and in the latter case at full length, translated word for word from the account of the *Conferenz zur Erörterung der Cholera Frage, Berliner klin. Woch.*, 31, 1884. In this exceedingly valuable statement as to the distribution, morphology, and cultivation of the comma-bacilli Koch lays down several general laws which may be thus epitomised—(*a*), that the comma-bacilli occur in the intestinal dejections during the acute stage of the disorder; (*b*), that they occur in the mucus-flakes and in the fluid of the contents chiefly of the lower ileum; (*c*), that they are present in the mucous membrane of the lower ileum, in the lining of the epithelium, in the lymphatic tissue of the mucosa, and in the glands; (*d*), that the more acute and typical a case of cholera, the more numerous are the bacilli found in the lower ileum; (*e*) that no comma-bacilli occur in the blood, in the mesenteric glands, or in any other organ. With most of these propositions Klein is in agreement, but he does not find that in the most acute cases the bacilli are of necessity the most numerous, since in some typical, acute, and pure cases they were found to be present in small numbers, together with multitudes of other bacteria; neither does he think that the bacilli are to be found, as a rule, in the tissue of the intestine in acute typical cases of cholera, although in some cases they may penetrate from the cavity into the wall of the intestine. A long and interesting chapter is devoted to the morphology and cultivation of Koch's comma-bacilli, but it is to the following chapters that the reader must look to find the main points of controversy between Koch and his followers and our author. It appears that Koch founded a good part of the theory of the causal relation of the comma-bacilli to cholera upon his inability to discover them anywhere but in cholera cases, with a single exception of a salt-water lake in Calcutta. Since then, however, a great many species of curved or comma-bacilli have been discovered; notably a now well-known variety found by Finkler and Prior, in the dejections from cases of cholera nostras. Some of these varieties agree closely in their morphology with the original comma-bacilli of Koch. All of these micro-organisms are carefully described by Klein. The author, from careful observations, appears to have arrived at the conclusion that the comma-bacilli which Koch thinks are the cause of cholera, are merely saprophytic bacteria, and that their appearance in large numbers in the stools of those affected with cholera is rather the effect than the cause of the disease, since by it a special nutrient material is supplied in the characteristic intestinal secretions. Klein also points out that other bacteria, especially a variety of very small straight bacilli, are as often found in cholera dejections as are Koch's bacilli, and indeed bear even a closer relation to the disease. All of these bacteria Klein, however, thinks are saprophytic and non-pathogenic. Thus it would appear that the cause of cholera has not yet been discovered.

It would be out of place here to discuss the evidence for and against this contention; it will suffice to say that the arguments against the views of Koch are stated in this book with the skill of an experienced controversialist and appear to us to be very convincing. Whatever view is taken, however, as to the *rôle* of Koch's comma-bacilli in cholera Asiatica, it will be generally admitted that this monograph of Dr. Klein's forms a valuable contribution to the literature of cholera. In addition to this, the book ought to clear up a good deal of misunderstanding about the author's views which, we gather from the text, has arisen in several quarters. VINCENT D. HARRIS, M.D.

ARTICLE 1768.

The Operative Treatment of the Hypertrophied Prostate. By F. J. WATSON, M.D. Boston, U.S. 1888.

THIS handsome work contains the substance of an address delivered before the American Association of Genito-urinary Surgeons, at the fifth triennial meeting of the congress of American physicians and surgeons at Washington, Sept. 19, 1888, and is a valuable contribution to the surgery of the prostate. It is a very original work, and deserves to be carefully studied. The subject has been brought into special notice lately in England by the work of Sir Henry Thompson and Mr. Reginald Harrison, and by the observations of McGill, Mayo Robson, Whitehead, Buckstone Browne, and others, which we have already referred to in these pages. But we have in this work such admirable representations by the photogravure process of the specimens upon which the author's conclusions are based that we can judge with more facility than usual whether his conclusions are warranted. As many as thirty specimens of hypertrophied prostate are here depicted on quarto plates, and are excellent works of art, besides being very accurate representations of the originals. They are taken from specimens which the author has been able to meet with, and are new to English medical literature. Most of the plates contain a proportionately enlarged inch scale, which is a valuable addition, but the plates are said to represent the actual size of the specimens.

The objects sought in this work have been to lay down the lines which the author believes should govern surgical action in regard to the hypertrophied prostate; to set forth the reasons which shall govern the choice of operation; to demonstrate that operative treatment is surgically demanded in the appropriate cases—in the light of the evidence at our disposal and in contravention of the opposite opinions of Guyon, Thompson, Socin, and others; to offer two adjuvants to the technique of the operation, the perineal drainage-tube and the galvano-cautery prostatectome; and to contribute two clinical experiences.

He starts with the statement which we should be much inclined to question:—'Of all men beyond the age of 55 years we know that about one in every seven has an hypertrophied prostate,' and passes to the main subject of his inquiry, which is really the aggravated form of the disease. For these cases he is anxious to learn whether what he terms palliative or radical treatment is likely to be most serviceable. The palliative includes—1. Perineal drainage. 2. Suprapubic puncture with retained cannula. 3. Suprapubic cystotomy with retained cannula. The radical operations are—1. Division of the median enlargement by cutting instruments passed from the urethra—urethral prostatotomy. 2. Removal of the whole of the median enlargement by the same channel — urethral prostatectomy (Mercier and others). 3. The same operations done through an external perineal urethrotomy—perineal prostatotomy and prostatectomy. 4. Tunnelling the median enlargement through an external perineal urethrotomy (Harrison). 5. Suprapubic cystotomy and removal through this route of the median enlargement—suprapubic prostatectomy (McGill and others). 6. Division of the median enlargement by galvano-cautery through the urethra from the meatus (Bottini). The methods of Heine, Newman, Biedert and others of iodine injection, cauterisation and electrolysis are not considered, as they have either failed or have not been attended hitherto with sufficiently reliable results. The author then gives briefly but clearly the technique of the various operations and the indications for the necessity of operation of some kind. But he finds no definite principles underlie the opinions formed by modern authorities on the choice of operation, and his object is to supply a rationale based upon an analytical study of the actual conditions encountered. And he gives a valuable series of cases which make the work of peculiar value to the surgeon and pathologist. Thirty cases are here depicted, but it is not clear to the reader from what sources they are obtained. However, as they are all full-sized photogravures of the original specimens they are likely to be of great use.

In studying these there are three points which he considers of special importance with reference to the choice of operation—1. The distance from the juncture of the membranous and prostatic urethras to the most distant point of the median enlargement within the bladder—the perineal distance. If this is not above three inches, the median enlargement can be reached by the finger through a perineal opening and effectually operated on from this part. 2. The form of the median enlargement. If this be pedunculated or very salient, even if within reach from the perineum, the suprapubic operation will generally be preferable. Mercier's and Bottini's operations are only suitable when we know beforehand that we have to deal with a form approaching that of a bar at the neck of the bladder. 3. The small capacity and non-distensibility of the bladder or the reverse condition is another important matter to be considered. Bearing these three factors in mind, the author carefully examines his anatomical specimens with the following important results—that, contrary to the statement of Professor Guyon, the large majority of specimens *do* present such forms as to render radical operations possible and often easy—that in twenty-seven of the thirty cases the median enlargement formed the chief obstacle to urination—that in twenty-one of the thirty cases the median enlargement would have been successfully reached, incised or removed through the perineal route by any one possessing an index finger with a working length of three inches—that in ten, or nearly one-third of all the cases, the bladder was so small and incapable of distension as to render the suprapubic operation impossible. But we are not ourselves convinced on this last point, as the distensibility of the bladder cannot be shown by plates or even by preserved specimens. Continuing the summary, it is shown that in seven cases the great distance of the median enlargement from the perineum makes the suprapubic the only feasible operation. It is evident, therefore, that the anatomical forms and conditions are such that no one method is adequate for, or applicable to, all the varieties liable to be encountered. But we are more or less compelled to one or another according to the conditions met with.

Turning to the clinical evidences of the various operations he would inquire as to their total mortality, their relative mortality, and the permanency of their results, but he finds the records meagre, and gives tables of all the cases he can collect. He also adds two cases of his own—one of suprapubic prostatectomy in a very old man who died, and the other a case of perineal prostatotomy in a man of 74, who recovered.

The results arrived at in this work are that operative interference is not only justified but demanded in such cases, and it only remains to determine whether the palliative or the radical treatment is required. If the patient's condition is one of such exhaustion as to make a radical operation almost necessarily fatal, a palliative operation should be done, and for this the best is drainage through the perineum. Radical operations are, however, not more dangerous, and if successful accomplish much more. Mercier's and Bottini's operations from the meatus are applicable to only a limited number of cases. These are when a bar exists at the neck of the bladder, and are not easy to diagnose; moreover, free drainage is difficult to secure. Of the cases described anatomically, two-thirds were operable through the perineum; and, clinically, the perineal operation is safer than the suprapubic. The conclusion to be drawn is this:—In a given case open the membranous urethra, put in your finger and explore. Twice out of three times the operation can be completed by this route; in the other third, the long perineal distance, or the form of the enlargement, will make the suprapubic operation necessary. When this is the case, and if at the same time the bladder can be distended so as to allow of the operation being done with the modern technique, proceed to do it at once or later. The author might have added that the preliminary perineal opening serves for subsequent efficient drainage.

Such is essentially an outline of this valuable work, and the author is to be congratulated upon his success in treating this important subject. It is a marked advance that he has made in trying to lay down some general principles which should guide us in selecting particular operations for the treatment of these cases, and it will be possible for a surgeon to see in these excellent photogravures arguments for or against special methods. Mention is just made of the tunnelling process of Mr. Reginald Harrison, and it is possible that surgeon will see that many of the specimens point to the advantage of such an operation; but we cannot but recognise that the author has discussed the whole subject philosophically and without prejudice. We have pointed out that the evidence as to distensibility of the bladder in many cases is not conclusive, and would suggest that in some of the plates the position of the bladder when it has been cut away might be indicated by dotted lines so as to render the anatomical topography clearer. In one of the cases, or more, there existed very thin-walled pouches projecting from the bladder, and it is a possibility that distension of that viscus by injection might have proved fatal.

W. W. Wagstaffe.

NOTES ON BOOKS.

Article 1769.

Clothing. By Francis Vacher, F.R.C.S. Pp. 20.

Persons who are ready to accept sound advice will find in this small reprint from the *Provincial Medical Journal* of March 1889 many concisely worded and practical hints.

The first two pages, it is true, appear to contain a laugh at the numerous champions who run a 'tilt' at corsets, tight high-heeled boots, or weight of clothes suspended from women's hips, or who advocate divided skirts or woollen underclothing. No great results, it is stated, have crowned their efforts, but 'all that is wanted is a guide to the guides,' hence the publication of the present paper. Readers who, because of this opening, either fear that the author is about to demolish the proposed reforms, or who hope in his ample promise of guidance, will be alike disappointed. His real adhesion to the alterations advocated becomes strongly marked when in the substance of his didactic chatty advice he proceeds independently to adopt each and all of them.

The writer makes no actual reference to Mr. Treves' *Influence of Clothing on Health,* but his arrangement of subjects and treatment of details may alike recall that valuable little work.

Narrow and high-heeled boots receive fitting condemnation, but here and elsewhere, whilst Mr. Vacher energetically enforces his point, one is inclined to feel the sense of proportion disturbed. Thus the Paris boot, which constricts the foot, is declared to be in its way nearly as bad as the corset that compresses the vital organs. Those who have the opportunity of inspecting many feet may gladly admit that, though the evil undoubtedly survives, degrees of deformity like that represented in the author's diagram are a result of boots which were in fashion many years ago. The distortion of the smaller toes is surely downwards as indicated in the same diagram, far more frequently than upwards as stated (perhaps by a misprint) in the text.

The corset, Mr. Vacher aptly maintains, 'interferes with the action of the lungs in much the same way as fastening the handles together would interfere with the action of the bellows;' it causes wasting of the muscles beneath it, and amongst other pathological results, displaces and compresses the stomach and liver. He advises that women's lower garments should be secured around the pelvic bones, not about the waist, and holds as a theory of the objectionable 'dress improver' that it has been seized upon by way of relief from the excessive weight and heat of material introduced into the back of skirts.

The statement that 'combinations' have no advantage over two separate garments would probably surprise many female wearers. The extensive adoption during the last few years of a garment which conforms to the principle of removing the bearing from the waist, and which obviates in that region superfluous doubling of material, is surely a hopeful prognostic of reform in feminine clothing.

In the matter of distribution of weight, the author believes that men, for their part, err in carrying an excess upon the shoulders; but he offers no suggestion for practical alteration.

In regard to warmth, Mr. Vacher leans towards the beneficent side. Thus he forcibly condemns faults in evening dress. Men are usefully advised to wear a large chest-protector of double flannel beneath the open shirt-front. Women's evening attire is said to contain 'a frigid zone and a temperate and a torrid zone'—an apt comparison, for which Mr. Treves gives credit to an American lady, Mrs. Woolson (*Dress and Health,* Montreal, 1880). As a matter of individualising, it might be correctly added that the risk of chilling is much greater when evening dress is put on exceptionally, and less when it is worn regularly. There is doubtless room to individualise also in regard to such details of warm clothing as long sleeves for jerseys, since certain persons instinctively crave lighter or warmer clothing over this region or that, herein exhibiting susceptibilities which may be compared with individual variations of blood-distribution to different regions.

As to winter-clothing, the paper quotes the popular saying that it should be continued 'till May is out,' and recommends that it should be resumed in September. It will be noticed that this gives little more than three months during which such clothing may be discarded—a rule which cannot be generally accepted, at least in the south of England. Most persons after the summer months are in fact well able to endure the first colder weather, probably on the same principle that returned Anglo-Indians frequently feel the whole of their first winter in England quite tolerable, or that some chilly persons remain comfortable during several days after a Turkish bath; and for individuals requiring much clothing, it is nearly as important to know when to keep it light as when to increase it. The author usefully condemns the oppressive head-gear frequently placed upon babies and little girls. He insists that infants are usually overclad, and deprecates 'long clothes,' together with the traditional binder.

The paper is in the main marked by shrewd common sense. The advice it contains can be safely commended to the general reader who knows how to value personal health.

W. Wilberforce Smith, M.D., M.R.C.P.

Article 1770.

The Treatment of Female Inebriety in the Cultured Classes. By Mrs. L'Oste. London: H. K. Lewis. 1889.

The authoress presents her readers in this interesting pamphlet with deductions based on twenty-seven years' experience in the care of female inebriates of culture and refinement. Modestly yet boldly stated, Mrs. L'Oste speaks with no uncertain sound on the recognition of inebriety as a disease, and on the beneficial influence of this being impressed on the patient, in enabling the latter to understand the nature of her disease. This alone had often encouraged women who had felt hopelessly degraded to face all the discomforts of prolonged treatment in a home with hope and cheerfulness. The authoress discusses the length and conditions of proper treatment. From one to two years' residence is generally needed, and there must be strict abstinence, firm discipline, considerate watchfulness, and medical care. The hereditary character of the disease in many cases is noted, this being frequently evidenced in the children by an inordinate craving for hot pickles and condiments. About 30 per cent. of the cases had been permanently cured.

NORMAN KERR, M.D.

ARTICLE 1771.

Journal of Laryngology and Rhinology. Edited by Sir M. MACKENZIE and R. NORRIS WOLFENDEN, M.D. May 1889. London: R. Anderson & Co.

THE current number of this Journal contains a paper on the choice of anæsthetics in nasopharyngeal operations by Dr. J. F. W. Silk, in which the author expresses an opinion in favour of ether, and of nitrous oxide gas in operations of short duration. The remainder of the issue is devoted to a report of the proceedings of the British Laryngological and Rhinological Association. These consist of papers by Dr. Warden and Messrs. Stoker and Millican with the discussions thereon, also a full report of the discussion on a paper by Mr. Lennox Browne on the relative merits of early and late tracheotomy in chronic diseases of the larynx.

E. CRESSWELL BABER, M.B.

ARTICLE 1772.

Lexicon of Medicine and the Allied Sciences.

THE fifteenth part of this excellent work, published by the New Sydenham Society, is just published and completes the third volume. This is a most useful book to possess, and when complete will be a valuable addition to any medical library. It is edited by Mr. Henry Power and Dr. Leonard Sedgwick. The principle of the work is based on Mayne's *Lexicon*. It is most exhaustive in character, giving an explanation with the derivation of every word used in medicine and the allied sciences.

RICHARD NEALE, M.D.

ARTICLE 1773.

Le Bulletin de la Société des Médecins et des Naturalistes de Jassy. Dirigé par le Docteur GEORGES BOGDAN, Chirurgien-adjoint des Hôpitaux de Jassy. Deuxième Année, Août 1888. Jassy: Imprimerie Nationale.

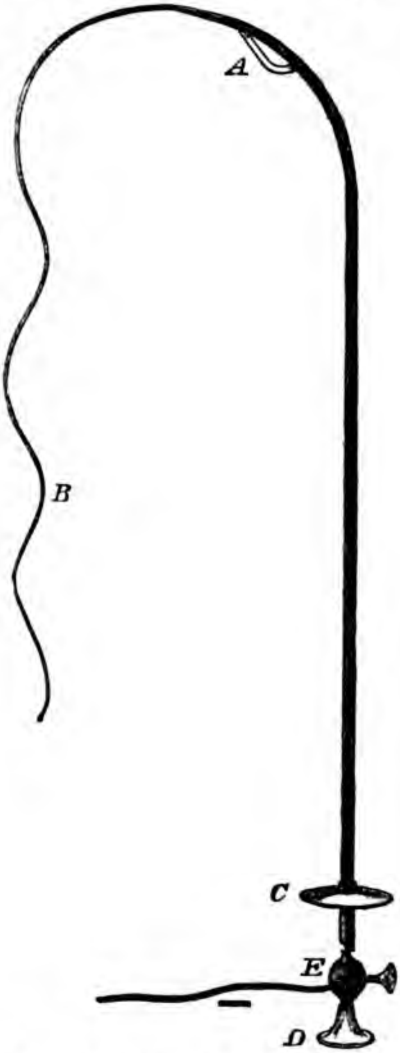
THIS *Bulletin* appears in the form of a monthly periodical of thirty pages, price one franc. Each page has two columns—in one the text is in French, in the other in the Roumanian language. The greater part of the *Bulletin* is devoted, as the title implies, to reports of the Societatea de Medici si Naturalisti din Jasi. The profession in Moldavia seems to be much interested in the alleged virtues of preparations of iodoform and tar. The mixture is free from the smell of the former compound. Externally it has been employed with success in cases of syphilitic ulcers; internally as a pill, including a small proportion of opium, it has been given in phthisis. Drs. Negel and Otremba have wisely decided to wait and observe a long series of cases before they publish the results of treatment of consumption by the internal administration of the new compound. A paper of some interest on 'Fungus of the Dura Mater,' by Drs. Bogdan and St. Nedelco, is illustrated by a fine woodcut of a case, obtained by photogravure. Ten years ago very few leading medical papers amidst the oldest nationalities could furnish illustrations approaching in excellence that to which we refer.

ALBAN DORAN.

NEW INVENTIONS.

INSTRUMENT FOR URETHRAL STRICTURE.

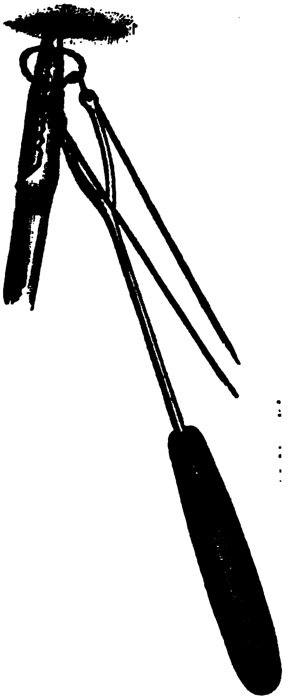
DR. J. A. FORT, of Paris, has published a pamphlet describing a method of curing urethral stricture 'rapidly and without danger.' It consists essentially in an electrolytic internal urethrotomy, performed on the lines laid down by Dr. Jardin some years ago, and with a very similar instrument. Dr. Jardin, who was *Chef de Clinique* to Professor Mallez, constructed an *électrolyseur linéare*. This instrument is similar to the Maisonneuve urethrotome, with the exception that the cutting blade of the latter is replaced by a non-cutting platinum blade which is in insulated connection with a Stohrer's battery. Above is a representation of the instrument; A is the platinum blade in insulated connection with the negative pole of the battery by means of E. The guide, B, is passed through the stricture until the blade, A, is stopped by the stricture; the positive pole is then laid upon the groin or back, and a current of 20 to



5 milliampères is switched on; the blade rapidly evers the stricture. Dr. Fort, who has operated y this method in 400 cases of stricture in South America, has modified the instrument by having it made of one entire piece instead of three pieces. He has increased the height of the blade by three millimètres. He claims that the tightest strictures can be operated upon with the modified instrument; hat he never has had any hæmorrhage, and that he can operate without pain.

A NEW KNOT-TIER.

THE accompanying cut represents an instrument devised by Dr. Charles D. Scudder, of New York, o help in making knots, when suturing or ligaturing, n cavities.



The instrument consists of a two-pronged steel aft with a baked-rubber handle. Each prong has eye near its end, and the distance between the es is three-eighths of an inch. The form of the ongs has been changed since the drawing was de, and the fork is now lyre-shaped. It can be made rved to any degree desired. The holes are carely bevelled, and three sizes—nine-inch, six-inch, d four-inch length—are made by Tiemann & Co. In ligaturing, the first knot is carried over the emostatic forceps, and the ends of the ligature hich should be of good length) are passed through e holes in the fork, as shown in the sketch. The ot is carried down and placed by the knot-tier erever wished, and suitable traction is made by lling on the ends of the ligature, which are apped around the fingers of either hand, while adying the handle with the thumbs. The instrument is then removed carefully, in order not to undo e knot; a new hitch, single or double, is made, e ends again threaded through the eyes, the knot aced, and firm traction completes the operation.

In suturing, the needle is detached after the suture is passed through the tissues to be sewn together, and the knot is made and placed as above described.

Dr. Scudder states that a little practice will enable the operator to apply knots quickly and surely.

A NEW ANTISEPTIC THERMOMETER CASE.

DR. CH. BAILLY recommends an aseptic case for thermometers for taking the anal temperature. This case, which is of metal, wood, or India-rubber, is in two pieces. The lower one, which presents the appearance of an elongated thimble, is from four to five centimètres long. It is filled with the antiseptic agent, and screwed on to the other portion, which is cylindrical and open at both ends. The thermometer is placed in this case, its lower extremity, in which the mercury is collected, being permanently plunged in the antiseptic substance. The following solution is employed:—Salol, 1 grain; oil of vaseline, 5 grains; vaseline, 4 grains. On each turn of the screw is fixed a tiny tin ring, which renders the cavity of the case completely water-tight. The manipulation of the instrument is very simple. Immediately after the temperature is taken the thermometer is thoroughly cleansed and replaced in its antiseptic sheath.

SANITARY CLOTHING.

UNDER the title of 'Hygienic Tailoring,' Messrs. Samuel Brothers, the well-known clothiers, of Ludgate Hill, have introduced a great improvement in connection with men's coats, vests, and trousers. It consists in using linings made of pure wool in place of the cotton or linen linings at present employed. The firm have taken for their guide the dictum formulated by Professor Pettenkofer in 1864, that means should be provided to allow free evaporation of the exhalations of the body while retaining the natural warmth, and securing means for a supply of fresh air to replace that thrown off from the skin. So far as underclothing is concerned this desideratum has been provided for by systems now in use, but it has been reserved for the firm in question to complete the method in relation to outer garments. The linings in question are especially woven for their several uses, and are made to assimilate in appearance with those now in use, though manufactured from pure wool. Coat linings, and back of vest linings, coat canvas, sleeve linings, coat pocketing, trousers pocketings, stays of buttons, interlining and linings for vests are provided of woollen fabric. Some of these linings are also applicable to women's dresses, so that they also may participate in the advantages of Messrs. Samuel Brothers' new invention. The additional cost of the sanitary linings for men's garments varies from 4*s.* 6*d.* to 6*s.*, and it is certain that those persons who appreciate healthy and comfortable garments will scarcely object to so small an additional charge, when the hygienic advantage attained is so obvious.

NEW PREPARATIONS.

APOMORPHINE TABLOIDS.

WE have received from Messrs. Burroughs, Wellcome, & Co., a sample tube of their apomorphine tabloids for hypodermic injection. Apomorphine is the most efficient and most readily employed emetic we possess, and no medical man should be without it, seeing that he can never know beforehand under what circumstances he may be called upon to treat an urgent case of poisoning. The tabloids, each of which contains the average dose (one-tenth of a grain), constitute a very convenient method of keeping the drug ready dosed and in small volume, and every pocket hypodermic case should contain it.

THE WATERS OF CONTREXÉVILLE AT HOME.

In our holiday number of July 1888 we mentioned the watering-place of Contrexéville, situated in the Département des Vosges (France), at a height of about 1,000 feet. We also gave the chemical analysis of these waters, to which Contrexéville owes its ancient reputation, and which have more than justified their reputation by numerous and permanent cures.

The spring has been known for more than 150 years. Bagard, the chief physician to the King of Poland, and President of the Royal Medical College of Nancy, by whom these waters were first analysed, writes thus on the subject:—'These waters are useful in preventing relapse in cases of gout. The water of the "Pavillon Spring" is infallible in diseases of the kidneys, the ureter, and bladder, such as stone, gravel, suppuration, and ulceration of these parts.' He then relates examples of cures of the above complaints, and notably of stone and gravel (public meeting of the Royal Society of Science of Nancy, Jan. 10, 1760). Subsequently, Thouvenel and Mamelet, successors of Bagard, and several other well-known French and English doctors, for example, Legrand de Saulle, Baud, Cruize of Dublin, Burney Yeo, Debout-d'Estrés, Brongniard, &c., have published similar notes, dwelling particularly on the peculiarly calming effects of the waters of the 'Pavillon Spring' in urinary disorders, and of the painless expulsion of small stones through the beneficial effect of these waters.

The Pavillon Spring, or *Source de Pavillon*, yields more than 200,000 litres of water, or 13,000 gallons per diem, the temperature being 11°·5. This temperature and the quantity emitted are invariably the same all the year round.

The water of this spring is remarkably clear, fresh, and agreeable to the palate; it deposits on the edge of the glass into which it is poured, oxigenised bubbles; it is slightly alkaline, and has a density of 1·055. Though containing a great quantity of sulphate of lime, it is easily digested, and at the spring invalids may drink during the space of three hours, before breaking their fast, 4 or 5 litres, without experiencing any discomfort, and with a decided and considerable increase of appetite.

The waters of the Source de Pavillon are used in cases of gout, gouty diabetes, albuminous gout, all kinds of gravel, catarrh of the bladder, hepatic colics, diseases of the prostate, and incontinence of urine. Thousands of patients can attest the extraordinary efficacy of these waters in the above complaints when drunk directly from the spring.

Its curative powers are said to work with equal efficacy when the water is bottled and sent out, and many invalids, unable to return year after year to Contrexéville, testify to the benefit derived from the waters sent to them.

MISCELLANY.

German Dental Congress at Hamburg.—The annual congress of German dentists was held at Hamburg on April 23 to 25, being attended by about seventy representatives from different districts of the Empire besides members of the profession from Austria, Holland, and the United States. Great Britain was unrepresented. The chief subject discussed was the method to be adopted to insure increased dental efficiency. As a means thereto it was proposed that a complete education at a German gymnasium should be a *sine quâ non* for aspirants, and that the duration of the period of study should be extended from four to six or eight terms. Unanimity on the point not being arrived at, a committee of five members was elected for the purpose of ascertaining the opinion of all German dentists on these points, the report to be ready for next year's congress, which, it was decided, should be held at Berlin in April next. Of the scientific papers read, the most interesting were those of Dr. Fläche (Bremen), in regard to the use of electricity as a dental medium; Dr. Brandt (Berlin), who exemplified the newest methods of closing defective palates; and Dr. Sachs (Breslau), who reviewed the materials in use for filling defective teeth. The last-named lecturer added interest to his subject by practical demonstration with a human skull, the teeth of which he filled with various materials, completing the set with artificial specimens.

Dangers from Consumptive Fellow-Travellers.—In the *Illustrated Med. News*, March 1889, p. 294, attention is drawn to the danger run from travelling with consumptive patients. There is strong evidence that on board ship it is very easy for husband and wife to communicate the disease to one another. It is even possible for a healthy person to become consumptive if sharing the same cabin as anyone known to have the disease. On board ship there is often a great deficiency of fresh air, and the cabins are badly ventilated, to say nothing of the danger of taking the poison from the upsetting of utensils which contain sputum. The danger of travelling with infected fellow-passengers in a railway carriage or public conveyance may be so infinitesimal as practically to be neglected, yet when one is brought into contact with an infected individual for a considerable length of time, and more especially when the air which the infected and non-infected individuals are forced to breathe is neither large in quantity nor good in quality, the danger is undoubtedly a real one, and it is to be hoped that means will be taken to prevent the spread of so fatal a disease in this manner.

Disinfectants.—By a letter dated July 5, 1888, the Préfecture de la Seine addressed a request to the Minister of Agriculture to consult the Committee of Inquiry into Infection on the most efficacious preparations for neutralising the morbid germs of different diseases which animals might contract. Pending the reply of the Minister, important modifications have been made in the products for the disinfection of the Cattle Market. Carbolic acid, as employed by the Sanitary Service of the Cattle Market from May 1 to July 1, 1888, was incapable of easy dilution; it left the ground greasy and gave rise to complaint that it made it dangerous for the animals to move about. It also made dark stains upon the pavement, and owing to the impossibility of making a perfect mixture of the carbolic acid with water it produced a very irregular distribution, which under certain circumstances might prove dangerous to the animals. Its odour prevented its employment in the stables, and it was only used in the passages and selling sheds. This disinfectant has been replaced by cresyl (Jeyes' fluid). Whilst carbolic acid gives out a permanent odour which may perhaps predominate and mask other odours which it may be desired to destroy, cresyl carries away the odour which it is desired to dissipate, and in two hours after its use no odour whatever is left, that of the cresyl itself disappearing with that which it is called upon to combat.

The London Medical Recorder.

Article 1774.

MONTHLY MIRROR OF MEDICAL SCIENCE.

Medicine.

Lactose as a diuretic in heart disease.

Dr. Germain Sée speaks (*Semaine Médicale*, June 12) in terms approaching to enthusiasm of the value of lactose (sugar of milk) as 'a new diuretic remedy in diseases of the heart.' It is, according to him, at once the most powerful and the most innocuous of diuretics. Milk itself taken in large quantities is a diuretic, but it causes at the same time a transient glycosuria, and moreover occasions a considerable loss of urea. Sugar of milk, on the other hand, has not these disadvantages; 'enormous' diuresis is produced by the administration of one hundred grammes of lactose—that is to say, the amount contained in two litres of milk. The diuretic effect produced by a potion containing that amount of lactose is greater than any produced by drugs; it quickly reaches two and a half litres of urine a day, almost always rising to three and a half and even four and a half litres on the third day. During this period dropsical effusions disappear, and the blood is dehydrated. Its effect is certain in cardiac dropsy; in renal dropsy, on the other hand, its action is much more doubtful. In cardiac cases it fails only when the complication of Bright's disease exists, and when the albuminuria amounts to from sixty to ninety centigrammes per litre of urine. Diarrhœa or copious perspiration may also lessen the diuretic effect of lactose by dehydrating the blood. The remedy is, as a rule, well borne. It should be continued for eight or ten days, when the administration should be interrupted for a few days and afterwards resumed. The taste of the draught may be improved by the addition of a little brandy or peppermint. During the administration all other beverages, including milk, and even *bouillon*, should be forbidden. Lactose does not increase the secretion of urine by raising the blood-pressure, but has 'an elective and selective action on the secreting elements of the kidney.' M. Sée considers lactose far superior both to the diuretics which operate by increasing the blood-pressure (digitaline, convallamarin, strophanthus), and to the renal diuretics proper (caffeine, theobromine). 'We have, then,' concludes M. Sée, 'in lactose the diuretic remedy of affections of the heart which have reached the disturbed or asystolic period, the true curative remedy of cardiac dropsies, always serious, sometimes irremediable, even of those which have resisted other diuretics.' If there is dyspnœa associated with the cardiac dropsy, iodide of potassium must be given at the same time. In this combination 'we have a marvellous treatment for cardiac affections.'

Surgery.

Extra-articular wiring of transverse fracture of the patella.

At a meeting of the Clinical Society of London on May 24, Mr. Mayo Robson showed a patient on whom he had successfully treated transverse fracture of the patella by bringing the fragments into close apposition without opening the knee-joint. The skin over and around the joint was first rendered aseptic and the joint was then aspirated. The skin was next drawn well up over the upper fragment and two long steel pins with glass heads such as ladies use for fastening the bonnet were after thorough purification passed through the limb from one side to the other, one of them just above the upper border of the upper fragment, the other at the upper end of the ligamentum patellæ. Gentle traction on the pins at each side brought the fragments into apposition. The ends of the pins were then clipped off, leaving about half an inch on either side. The parts were finally covered with antiseptic gauze. When the dressing was removed after three weeks, the fragments seemed well united. The pins were removed and a plaster-of-Paris splint applied. There was no rise of temperature, and the pins did not cause any irritation. The only precaution necessary was to draw up the skin over the upper fragment in order to avoid undue traction upon it when the fragments were approximated. It is well to insist on the use of a Thomas's splint for some time afterwards. The advantages of the operation are its simplicity, the absence of risk, and the obtaining of bony union. Mr. Mayo Robson stated this was the second case of the kind in which he had operated, and he had adopted a similar procedure in a case of fracture of the olecranon, but it was yet too early to say anything as to the result. Mr. Myles, of Dublin, some time ago described (*Brit. Med. Jour.*, March 16) a somewhat similar method of treating the same injury. He passed a strong pin transversely through each fragment of the patella and then brought them together by a figure-of-8 suture. The operation was entirely extra-articular, and gave good results.

Laparotomy for perforation in typhoid fever.

Dr. J. H. Nicholas has recently (*British Medical Journal*, June 15) made a somewhat sensational proposal with regard to the treatment of perforation of the intestine in the course of typhoid fever. He suggested that when diffused acute peritonitis came on, it might be accepted as a sign of perforation having occurred, and that before collapse supervened the abdomen should be opened and washed out, and the opening in the intestine stitched to the anterior wall of the belly. In spite of the possible objections to this plan—such as obscurity of the symptoms, the exhausted state of the patient, the difficulty of finding the point of perforation, the diseased condition of the intestinal wall, and the possibility of recovery in some cases without any interference—he thought the method might be tried with advantage, and he showed specimens in illustration of his views. It is said, however, that abdominal section has already been performed several times for the treatment of perforation of the gut in typhoid fever, and that the result has been uniformly fatal.

Tendon grafting.

Mr. Mayo Robson (*British Medical Journal*, June 1) has successfully grafted a piece of tendon in a case of severe injury to the forearm and hand. The dorsum of the hand was stripped clean of its muscular and tendinous structures, and the palm was extensively lacerated. A piece of hanging tendon, four and a half inches in length, was taken from the front of the hand, and attached to the extensor muscles and the remaining fragment of the extensor tendon by a single suture at each end. The wound was kept aseptic, and no sloughing took place. The man recovered the use of his hand so completely that he was able to return to his work as a weaver. The hand could be supinated and pronated, and the thumb and index finger could be moved. The tendon was grafted in the place of the common extensor of the index.

Laminaria in œsophageal stricture.

At a meeting of the Berlin Medical Society, on June 3, Professor Senator described a new method which he has recently used with some success in the treatment of stricture of the gullet. This consists in the employment of an ordinary œsophageal bougie, tipped with a piece of laminaria, and having a silken thread traversing its entire length and hanging out of the patient's mouth. Before the bougie is introduced it must be dipped in water, not in any fatty or greasy substance. The bougie is left *in situ* with the laminaria point in the stricture for half an hour, by which time the laminaria has expanded to a considerable extent; the instrument is then withdrawn. This procedure should be repeated every day, with occasional interruptions in order to avoid irritating the mucous membrane. Dr. Senator has up to the present time tried this plan only in cases of cancerous stricture, but he thinks it likely to prove of still greater utility in cicatricial stenosis.

OBSTETRICS.

Diagnosis of placenta prævia by abdominal palpation.

At a meeting of the Obstetrical Society of London on June 5, Dr. Herbert Spencer gave particulars of seven cases of placenta prævia in which he had been able by palpation of the abdomen to diagnosticate the presence of the placenta in, or its absence from, the front wall of the lower segment before a vaginal examination was undertaken. The diagnosis was subsequently verified by vaginal and intra-uterine examination. All the observations were made in multiparæ with head presentations, before the membranes were ruptured, without anæsthetics and in the absence of pains. In three of the cases the exact site of the placenta on the front wall of the lower segment was determined by abdominal palpation, and in two of these the placenta was felt at a time when it was impossible to feel it by the vagina. In the remaining four cases, it was ascertained in the same manner that the placenta was absent from the front wall. For the purpose of examination, the bladder should first be emptied and the patient should then lie on her back. The following rules for making the diagnosis were given:—In an ordinary vertex presentation (placenta in the upper segment) the occiput, forehead (at a higher level), and side of the head could, under favourable circumstances, be distinctly felt in the lower segment of the uterus by abdominal palpation. In a case of placenta prævia in which the head presented, the head was not felt where the placenta was situated, but was distinctly felt where the placenta was absent. When the placenta was in front, it was felt as an elastic mass, of the consistence of a wet bath-sponge, which kept the examining fingers off the head. Its edge might be felt and had the shape of the segment of a circle; within the circle all was obscure to the touch; outside the circle, the head or other part of the child was plainly felt. Impulses to the head were not clearly felt through the placenta; impulses to the head through the placenta were distinctly felt at the spot from which the placenta was absent. The same applied to combined vaginal and abdominal examination.

LARYNGOLOGY.

Endo-laryngeal operations by transmitted light.

Professor Voltolini, of Breslau, reports (*Deutsche med. Wochenschrift*, No. 17) what he claims to be the first operations which have been performed on the interior of the larynx through the mouth by means of transmitted light. Czermak (*Der Kehlkopfspiegel*, 2nd edit., Leipzig, 1863) had already shown that the interior of the larynx could be illuminated by a powerful light thrown on the outside of the neck, and had pointed out the advantages of this method of examination over ordinary laryngoscopy in the case of disease situated in the deeper parts of the larynx or in the trachea. As growths or other changes in the larynx when seen by reflected light in the laryngeal mirror are necessarily seen foreshortened, it is often difficult to judge of their exact size and position. Examination by transmitted light enables the surgeon to see the parts directly, so that he can judge accurately of their condition without being misled by the fallacies incidental to laryngoscopy; it also allows him to inspect regions which are often completely hidden from his view by disease in the upper part of the larynx. It is obvious that an indispensable condition for successful examination by this method is that the patient shall have a thin neck. Professor Voltolini operated endolaryngeally by transmitted light in the case of a girl aged 20, who was suffering from tubercular laryngitis with large vegetations springing from the interarytenoid space, and extending deeply downwards into the larynx. The patient was completely voiceless owing to the interposition of this mass between the vocal processes. After destroying some of the vegetations with the galvano-cautery in the ordinary way, Professor Voltolini, being unable to make a thorough clearance by this method, succeeded in destroying the rest of the growths by applying the cautery to the larynx illuminated by the passage of rays from an electric light through the neck. He has operated successfully in another case by the same method. Professor Voltolini, in the same paper, says that in cases of suspected laryngeal phthisis, even when there is no cough or expectoration, evidence of the presence of bacilli may be obtained by brushing out the interior of the larynx with a sponge attached to the end of a curved stem.

PATHOLOGY.

The supposed cancer bacillus.

The search for the cancer bacillus is being pursued with great energy by several investigators with results which appear to vary according to the degree of care that is taken to exclude sources of fallacy. Dr. Lampiasi-Rubino (*Riforma Medica*, January 1888), from experiments made with twenty-eight tumours—two encephaloid cancers, five epitheliomata, four scirrhous cancers of the breast, one adenoma, four sarcomata, two villous cancers of the vagina (in bitches), seven fibromata, and five lipomata—came to the conclusion that in malignant growths (including sarcoma) 'there is always present a specific bacterium, which differs in form and in life-history from other pathogenic micro-organisms,' and which is probably the cause of the disease. On the other hand, Dr. L. Makara (*Deutsch. med. Wochensch.*, 1888) made cultivation experiments with materials taken from twenty tumours with absolutely negative results, and inoculations proved equally unsuccessful. On January 18 of the present year Dr. Brazzola, in a communication to the Società Medico-Chirurgica of Bologna (*Gazzetta degli Ospitali*, February 10), gave an account of a long series of experiments 'with material taken from the very hands of the surgeon.' He made cultivations in agar, gelatine, potato, and human serum prepared according to Koch's method, without finding a specific microbe. Dr. G. Sanarelli (*Riforma Medica*, March 12), assistant in the Laboratory of Experimental Pathology at Siena, made experiments with twenty-one tumours, in most cases immediately after extirpation. Cultivations were made not only of the neoplasm but of the infiltrating material, vomit, blood, &c. Portions of peritoneal, pericardial, and pleural effusions were procured during life by means of a sterilised syringe, and exploratory punctures were made in the liver with a sterilised cannula. By these persevering researches, Dr. Sanarelli satisfied himself that he detected a cancer bacillus in four cases of malignant disease, out of five which he examined; in one of 'fibrous cancer' of the breast, and in three of epithelioma. One case of cancer of the rectum, one of atrophic cancer of the breast (in a bitch), and twelve of epithelioma gave negative results. Professor C. Sanguirico, of the University of Siena (*Riforma Medica*, February 27), in whose laboratory these experiments were made, points out that although some of the earliest inoculations had given rise to swellings, as to the nature of which he is careful not to commit himself, followed by general cachexia and death, his own inoculations had failed to produce such effects. He admits that the bacillus found by Scheuerlen, Sanarelli, and others, is one of a distinct species, closely resembling but not identical with the potato bacillus, as Senger maintained it to be; but concludes that 'nothing yet justifies us in accepting it as the specific cause of cancer.' Professor Platon Kübasoff, of Moscow, also claims (*Proceedings of the Third Meeting of Russian Physicians at St. Petersburg*, 1889, No. 2), to have discovered a special pathogenic rod-shaped microbe, which he believes to be the cause of cancerous growths. The bacilli have a slightly ovoid outline, and are arranged mostly in pairs and small heaps; their length is equal to one fourth of the diameter of a red blood-corpuscle. In a pure cultivation the rods grow best in coagulated blood-serum at the temperature of the body. When inoculated under the skin in animals, the microbe gives rise to a cancerous degeneration commencing in the nearest lymphatic glands and spreading to the internal organs, especially the mesenteric glands, omentum, liver, and pericardium. In all the organs genuine cancerous nodules are developed. By a series of twenty experiments, it was found that cats, rabbits, dogs, and guinea-pigs, when inoculated, died in from three to five weeks with generalisation of cancerous foci throughout the body. All cancers are caused by the same bacillus. Pure cultures of the microbe were obtained from two cases of uterine and one of mammary cancer, two of malignant disease of the stomach, and from secondary formations in a third case of cancer of that viscus. If given internally, the pure cultures caused symptoms resembling those of cancer of the stomach. Dr. Kübasoff, who is continuing his experiments, admits that the question is still unsettled, an opinion with which most competent persons will find it easy to agree. It cannot be said that the specific microbe of cancer has yet been found, and many high authorities, of whom Professor von Esmarch, of Kiel, is the most recent spokesman, appear to incline to the belief that it never will be found—for the very sufficient reason that it does not exist.

ARTICLE 1775.

POSSE ON THE THERAPEUTIC APPLICATION OF MEDICAL GYMNASTICS.

THE author points out, in the *Boston Med. and Surg. Jour.*, May 9, 1889, that we are indebted to Ling for a new impetus in the medical part of the science of gymnastics and the specialisation of each particular branch. Medico-gymnastic movements are active when executed by the patient himself, and resistive if the movement is against the resistance interposed by the operator. If the latter assists in the movement instead of opposing it, it becomes assistive. If the movement be effected without the assistance of the patient, it is called passive. The passive and the resistive methods are most used for therapeutical purposes. The number of different movements given in one application should be reduced to a minimum, usually not less than six and not more than twelve, occupying from thirty to sixty minutes. The movements should grow in power and duration in proportion to the strength of the patient, allowing a brief interval of rest after every two movements. In disorders of the circulatory system the aim of the movements will be to diminish the irritability of the parts in the immediate neighbourhood of the heart, which is done by passive expansion of the chest-cavity; and to prevent the too rapid afflux of the blood to the heart by increasing the circulation in peripheral parts. Whether the disease takes the form of hypertrophy, dilatation, fatty degeneration, or valvular deficiency, the character of the movements used will be very much the same, the chief object being to regulate the circulation of the blood and lymph. Among movements that have the best effects are the so-called 'respiratory' movements. These consist in passive expansion of the patient's chest by the operator, while the patient is breathing, as follows:—The patient sits on a chair (without a back); the operator, standing or sitting behind, grasps the patient under the arms, which are hanging loosely down; now the operator lifts the patient's shoulders upward and backward, while the patient inhales, and lets them gently sink, while he exhales. In this way the respiration becomes very deep, without any increased nerve-impulse from the patient, and the heart's action is by no means accelerated. The negative pressure produced during inhalation in the organs in the chest-cavity outside the lungs can in this way be made from five to six times greater than what it is during ordinary inhalation (which, according to Dr. Wundt, corresponds to the pressure of a 7·5 millimètres quicksilver cylinder); and the circulation in the adjacent veins is accelerated in proportion. The closing of the semilunar valves during the diastole of the ventricles and the resistance of the arterial walls prevent any marked retardation of the arterial currents. The effect can be still more increased if the operator lifts the patient's arms to a horizontal position during the inhalation, and again lowers them during the exhalation. Here the elevation of the arms not only expands the chest, thus aiding the respiratory act, but it also straightens the curve of the axillary artery, which lessens the resistance to the arterial current toward the arm, that is, the pressure in direction of the heart is lessened. These movements can be varied in many ways.

Professor Loven, of Stockholm, has shown that certain movements of the larger joints, by stretching the aponeuroses which are adherent to the walls of the larger veins, exercise a suction which materially assists the return current of blood. By alternate movements the veins may thus be alternately extended and contracted. This holds true also of the inferior vena cava, which is so placed along the front of the spine that it must follow the movements of the latter. If the thorax be bent forward, this vein becomes contracted, again to expand when the trunk is straightened. Experiments have proved that the capacity of the vessel largely increases at such extension. It is easy to understand how at every extension, and still more at backward flexion of the trunk, a suction is caused in all those veins which supply the inferior vena cava, especially in those of the lower extremities. A similar condition takes place in the veins of the arms when these are extended sideways and somewhat backward, with the hands closed. Finally, as regards the jugular veins, these are the most extended when the head is bent backward with upturned face.

The flow of lymph is accelerated *pari passu*. The author mentions two cases of dilated heart and one of fatty degeneration of the heart, in which this treatment effected a decided improvement in the symptoms.

Some diseases of the respiratory organs can be advantageously treated by medical gymnastics alone, especially disorders of the lungs; and that this should be the case is easily understood, when we remember that 'deficient exercise is one of the causes which favour those nutritional alterations in the lung which we class as tuberculous.' (Dr. C. A. Parkes.) Consumption has ceased to be an incurable disease, for, if taken in hand early, it will yield to medico-gymnastic treatment. The movements are here directed so as to aid the action of the heart, increase the chest capacity, and improve the general nutrition.

He also mentions several cases of bronchitis, asthma, and emphysema, which were markedly benefited by general massage, resistive trunk rotation and gymnastic respiratory movements, with passive vibrations of the thorax and chest percussion with the ulnar borders of the hands.

In disorders of the *digestive organs* a great deal can be done by massage, and still more by Swedish movements. The general object of the treatment here is to improve the general assimilation, to regulate the hepatic circulation and the peristaltic action of the intestines by suitable and judiciously applied gymnastic treatment. Most cases of confirmed dyspepsia yield to, or are benefited by, the treatment.

The various forms of neuralgia are exceedingly amenable to gymnastics and massage, which, together, seldom fail to effect a cure.

In disorders of the locomotory system, Ling's system has given good results, even in cases in which no other treatment is productive of benefit. This applies particularly to deformities and spinal curvatures resulting from faulty carriage (in consequence of a preponderance of muscular force on one side of the body); these are never now treated by any good orthopædist by any other method.

The author concludes by stating that in medical gymnastics there is a vast field for the exploring scientist, and there is an increasing demand from the medical profession in general that physicians should themselves take this matter in hand and not leave it to be practised only by uneducated charlatans and by a few specialists who have had a medical education for this particular purpose. The physician would then prescribe this treatment where it is indicated, and if he had neither the time nor the desire to apply it himself, he might be able to assist the *masseurs* by his greater and more extensive knowledge of general pathology, which a specialist must always more or less lack.

ALFRED S. GUBB.

ARTICLE 1776.

SIPPEL AND OTHERS ON SUPERNUMERARY OVARIES.

DR. ALBERT SIPPEL published, in the *Centralblatt für Gynäkologie*, No. 18, 1889, a case of dermoid degeneration of two ovaries on the right side. A young woman, aged 21, came under his care in January with a history of acute peritonitis during the previous August. An elastic tumour occupied the lower part of the abdomen, reaching as high as the umbilicus, another pressed down into Douglas's pouch, filling the pelvis to the right of the uterus. At the operation the upper tumour proved to be a dermoid cyst, closely adherent to the omentum. Its pedicle was twisted, and consisted chiefly of large obliterated vessels which ran into the broad ligament. The lower tumour, quite free from any connection, morbid or healthy, with the upper, was then drawn out of the pelvis. The pedicle, broad and short, was composed of the structures found in the pedicle of a typical ovarian cyst. This lower tumour had also undergone dermoid degeneration, but its pedicle had not become twisted. The evidences of peritonitis were limited to the surface and the connections of the upper tumour. The left ovary tube and broad ligament presented no abnormalities.

Dr. Sippel believes that in this case a supernumerary ovary existed on the right side, and that it is the first instance where dermoid degeneration of both the normal and the extra ovary has been detected. Much collective information on so-called supernumerary ovaries is to be found in Olshausen's *Krankheiten der Ovarien*, second edition, 1886. Authorities and casual observers appear to differ greatly as to what constitutes a supernumerary ovary. Grohe first noted the condition, describing a case where he traced the separation of two ovary-like bodies on one side of the pelvis to fœtal peritonitis. Klebs found two ovaries on one side, both consisting of ovarian tissue, and divided from one another by a band about three-fifths of an inch long. De Sinéty, in 1875, published the description of an ovary with half a dozen pedunculated bodies hanging from its surface. These bodies were all cystic excepting one, which contained follicles and ovules. Professor Olshausen removed a large tumour bearing all the characters of a multilocular ovarian cyst from a woman aged 36. It was attached by a firm, thick pedicle to the uterus, four-fifths of an inch behind the uterine end of the left ovarian ligament. The patient died, and the left ovary was found quite normal (as was its fellow on the right side); the pedicle of the tumour had no connection with the left broad ligament. Mangiagalli found a supernumerary ovary to the inner side of the normal organ in the body of a stillborn child. Both were of similar size and made up of ovarian tissue. Winkler found two ovaries hanging from a broad-ligament ('parovarian') cyst. [The reporter has repeatedly observed that a normal ovary, like the tube, may become greatly stretched over the surface of a cyst of this kind, so that parts of the ovarian tissue undergo atrophy. Hence three or four corpora lutea stand out, as though they were parts of the cyst, no ovarian tissue lying between them. This condition might be mistaken for supernumerary ovary.—*Rep.*] Lumniczer described a case precisely similar to Winkler's, a broad-ligament cyst existing on the side where there was an alleged supernumerary ovary. But both were connected by ligamentous tissue. Kocks discovered an ovary of this kind, four-fifths of an inch long, to the inner side of the normal ovary. Winckel found a supernumerary ovary connected by ligament with the natural ovary; the former had become a papillomatous cyst. [This fact suggests sources of fallacy, but want of space forbids discussion of the pathology of papillomatous cysts.—*Rep.*] In Winckel's second case a large supernumerary ovary was connected with the uterus by an ovarian ligament over 4½ inches long. He considered that the supernumerary ovary (which Birch-Hirschfeld found to consist of true ovarian tissue) had been developed separately from the normal ovary from the first. Beigel found small appendages to normal ovaries in 8 out of 350 bodies, these appendages being made up of ovarian tissue. He termed them 'ovaria succentauriata,' and found three on one ovary. Waldeyer once observed six on one side. Winckel detected ovaria succentauriata in 18 out of 500 bodies. Beigel always found these bodies along the limiting line of the peritoneum on the surface of the ovary. Olshausen attributed them to separation of ovarian tissue during the descent of the genital gland into the pelvis. The larger supernumerary ovaries appear, in his opinion, to be developed from ovaria succentauriata, excepting when due to changes resulting from fœtal peritonitis. De Sinéty has described a supernumerary ovary where the tissue was certainly ovarian, but the surface was invested with ciliated epithelium which dipped into the stroma at certain points. A small cyst projected from the surface: it resembled a Graafian follicle, but contained no ova, and was covered (*ausgekleidet*, invested externally, we presume) with ciliated epithelium.

The reporter detected a small 'ovarium succentauriatum' in a case where a fibro-myoma of the opposite ovarian ligament was discovered (*Trans. Path. Soc.*, vol. xxxviii., 1887). The latter condition might be taken for a case of supernumerary ovary.

Chiari has shown (*Zeitschrift für Heilkunde*, vol. v., part 6) that accessory suprarenal capsules might develop at any point between the kidney and the ovary, or the testicle. They might be mistaken for supernumerary ovaries when the observer happens to be imperfectly acquainted with the complicated histology of the structures in question.

In conclusion, it may be safely admitted that three conditions, described as 'supernumerary ovary,' occur. The first, the 'ovarium succentauriatum' of Beigel is well-established. The second, the condition where two masses of ovarian tissue are separated by a ligamentous band, has been repeatedly observed. The third variety is only represented by Winckel's second case; the completely distinct embryological origin of the abnormal organ cannot clearly be proved. If once proved, however, this variety alone deserves the name of 'supernumerary ovary.' Tumours are most likely to occur in the second variety, which represents a condition sometimes seen in lobes of the liver. Dr. Sippel's case comes under this category. The reporter once examined a dumb-bell shaped tumour, consisting of two small multilocular cysts connected by a stout band of ligament. We may put aside cases of atrophy of the middle portion of an ovary stretched over a broad ligament cyst, and cases of accessory suprarenal capsules lying in the pelvis far from the normal adrenal. ALBAN DORAN.

ARTICLE 1777.

THE DIAGNOSTIC VALUE OF THE TOLERANCE OF THE IODIDES IN SYPHILIS.

THE March number of the *Therapeutic Gazette* contains an interesting correspondence in connection with a discussion between Dr. J. W. White and Dr. H. C. Wood, of Philadelphia, on the above-named subject. The discussion appears to have arisen from a statement made by Dr. Wood to the effect that if (in a case of obscure disease of the nervous system) a daily dose of 60 grains of iodide of potassium fails to produce iodism, a diagnosis of syphilis is thereby practically established. Dr. White dissented strongly from this opinion, and Dr. Wood (the editor of the *Therapeutic Gazette*) invited correspondence on the subject. Dr. White then wrote to a number of gentlemen asking for information on the question at issue, and in reply received the twelve letters which are now published. The authors of these letters are Dr. McCall Anderson, of Glasgow, and the following well-known American physicians and surgeons—namely, Drs. James Stewart, J. N. Hyde, F. N. Otis, J. P. Bryson, J. B. Chapin, E. N. Brush, R. W. Taylor, F. R. Sturgis, E. L. Keyes, R. Park, and W. Osler.

The letters, some of which are of considerable length, contain a variety of information on the use and action of the iodides; but none of them supports the view that the mere fact of tolerance of large doses of the iodides is of practical value as regards a diagnosis of syphilis. Dr. Stewart, for example, says that though iodism is far from common in treating syphilis by iodides, 'the exceptions to this rule are, in my opinion, numerous enough to take away all value from the proposed therapeutic test.' Dr. Otis expresses his belief 'that such toleration is wholly valueless as a proof of the present or antecedent existence of syphilis in any case.' Dr. Bryson believes that the application of the test in doubtful cases would lead to error in two directions: 'By leading to a diagnosis of syphilis, when that disease was not present; and by failure to diagnosticate the disease when it was present.' Dr. Chapin says, 'If we administer the iodide in a doubtful case, and have no result, and have not poisoned our patient, we have only established the fact that no idiosyncrasy exists, perhaps nothing more.' Dr. R. W. Taylor says, 'My experience has not convinced me that syphilis gives a man any immunity, partial or complete, to the toxic action of the iodides.' Dr. Anderson says, 'I entirely agree with you in placing no confidence in the diagnostic value of the tolerance of the iodides in syphilis.' Dr. Keyes believes 'that the whole matter of the tolerance of iodides is personal with the individual, that this personality is not modified by syphilis, but it may and does change in some individuals, and that, too, without the intervention of syphilis.' Dr. Osler says, 'I confess to have shared the widely-spread belief in the affirmative proposition' [that tolerance is of diagnostic value] 'but in looking over my notes I find no data from which I can glean a positive answer one way or the other. . . . I have seen instances of undoubted syphilis in which intolerance of the iodides was a striking and persistent feature. . . . I am inclined to regard intolerance as a matter of idiosyncrasy.' Dr. Wood closes the correspondence with his reply, in which he states that as several of the correspondents have failed to understand his original paper, he proposes to formulate his views on the subject as follows: '1. There is no proof that iodide of potassium affects directly, or has direct interference with, the syphilitic virus. 2. In the state of the system which occurs in advanced syphilis, there is habitually such a change in the human organism that iodide of potassium is usually tolerated much more freely than in health. 3. That the statement made in paragraph number two is simply a general statement, useful in the prognosis and treatment of nervous or advanced syphilis, not without exception, not a law, but a rule or coincidence of sufficiently wide application to be of practical value in prognosing and treating disease.'

ARTHUR COOPER.

ARTICLE 1778.

CORNET ON THE DIFFUSION OF THE TUBERCLE BACILLUS EXTERNAL TO THE BODY.

THE observations of Dr. Georg Cornet of Berlin-Reichenhall on this subject have appeared in abstract from time to time in these columns. The additions which they make to our knowledge of the distribution and behaviour of the tubercle bacillus in other media than those of the human or animal body, are of great importance, and the full text of Dr. Cornet's work has lately appeared as a reprint from the *Zeitschrift für Hygiene*, vol. v., 1888.

The main object of the author's work was to ascertain not only the presence but also the vitality of the tubercle bacillus in the air, dust, or other solid media in places where phthisical persons were or had been living. Public hospitals, workhouses, prisons, and even the private apartments of phthisical patients in hotels and dwelling-houses were utilised as his field of research, while the work, as a whole, was carried on under the advice and with the assistance of Professor Koch in the Hygienic Institute in Berlin.

Reviewing the labours of others in the same field, Dr. Cornet points out the weak points in their methods of investigation—these being for the most part due to neglect of proper sterilisation of instruments, &c.—and describes his own precautions and methods of procedure. Attempts to discover the bacillus in any quantity in the dust of a room occupied by a phthisical person by direct microscopic examination were without result, and this is attributed either to the sparseness of distribution of the bacilli in so large an area, rendering it a matter of chance whether a few specimens taken at random should contain bacilli or not, or else to the possibility that the tubercular virus is present in the form of spores. His efforts to obtain pure cultivations were equally unsuccessful, owing to the large number of other forms of micro-organism of quicker and more prolific growth, by which the nutrient media were at once overrun. A long series of inoculation experiments were then undertaken, with positive results of a very striking character. In a very large number of instances, the dust collected from the neighbourhood of the bed of a phthisical patient (a spot under the head of the bed being usually chosen, where the dust could only have been deposited directly from the air) was found to produce definite tubercular lesions, containing tubercle bacilli, in the animals inoculated. Dust similarly collected and inoculated in the same way from wards or rooms in which no phthisical person had lived, never produced any lesions which could be remotely associated with tubercle. Having thus shown the presence and the virulence of the tubercular virus, external to the body, Dr. Cornet enters upon a still more important series of considerations, and the chief points upon which he insists may be briefly summarised as follows:—1. Although tubercular disease may possibly spread between one animal body and another by the eating of improperly cooked meat or of unboiled milk, still the commonest source of infection is undoubtedly the phthisical patient. 2. The tubercle bacillus is never exhaled with the breath. It is a solid body, sinking in air, in water, and even in pus, and hence is no more capable of being carried off by the process of evaporation than are the inorganic salts. Hence so long as the medium in which the bacillus lies remains in a moist condition, the bacillus remains with it. 3. The sputum of phthisical patients is the vehicle by which the tubercle gains access to the air. This, however, is only possible after the sputum has become quite dry and has been pulverised. Sputum collected in a handkerchief dries rapidly, and when so dried is quickly converted into a fine powder which is sooner or later shaken into the surrounding air. The same thing may occur when the sputum falls to the ground, and especially so in public places, where the constant traffic soon spreads and dries it and converts it into a diffusible powder. 4. The bacillus gains access to the lung by the process of inhalation of dust floating in the air, but owing to its properties as a solid body it finds numerous obstacles in its path to the alveolar structure, in the mouth, nose, larynx, and bronchi.

These conclusions, founded upon a good background of observation and experiment which should be studied in the original, afford a very striking confirmation of some of the previously accepted views and an equally remarkable refutation of others. The idea that the breath of phthisical patients might be the outward as well as the inward vehicle of the bacillus has been fully accepted by some observers, but the observations upon which the idea is founded are not sufficiently guarded against possible error to enable them to stand against Dr. Cornet's results. The view that the bacillus is only harmful to the lung when it is carried direct to the lung tissue, and there deposited on a (presumably) weak spot, goes far to explain one of the most difficult facts in the way of the acceptance of the theory of infection—viz., the non-conveyance of the disease from husband to wife, or from mother to infant, &c. It also throws some light upon the sequence of tubercular disease upon whooping-cough or other lung affections.

The phthisical patient must be regarded in himself as a non-infectious person; but, according to Dr. Cornet, the sputum which he ejects must be looked upon with as much suspicion as are the dejecta in enteric fever, and as much care must be taken to prevent its diffusion in the atmospheric air as is taken in the other case to prevent any possible contamination of drinking water. Acting upon this theory, the question of the disposal of phthisical sputa becomes at once a burning one. After discussion of the merits of other methods, the author recommends that stringent rules should be laid down for all phthisical patients against the promiscuous use of spittoons or handkerchiefs. He advises that special spitting-cups should be provided, and that they alone should be used, subject to frequent disinfection and cleaning before the sputum has time to dry. The practice of putting water or other fluids in such cups has the disadvantage of increasing the area of infected material in case of accidental upsetting. Glazed porcelain is the best material for the cups themselves.

Dr. Cornet closes the record of his work up to the present time with some important remarks as to the prophylaxis against the spread of tubercular disease. The growth of the tubercle bacillus is under all circumstances so slow in comparison with other infective organisms that the possibility of infection is generally left out of consideration because it is not a matter of common observation. How necessary it is that as much care should be taken in the case of tubercle as in the case of syphilis is shown by such experiments as the following:—After ordinary examination of the larynx in phthisical persons the laryngeal mirrors were washed in a 5 per cent. solution of carbolic acid, and presumed to be free from the possibility of conveying infection. The deposit left by the washing in the bottom of the glass containing the supposed antiseptic fluid was collected, and a small portion inoculated into guinea-pigs. In about thirty-two days the animals were found to be suffering from active tuberculosis.

The work that Dr. Cornet has done brings into prominence many minor points of great importance which we have not space to summarise, and the whole forms a most valuable and interesting contribution to our present knowledge of the etiology of tubercle. E. CLIFFORD BEALE, M.B.

ARTICLE 1779.

LOEWE ON A NEW PLUG FOR THE EAR-PASSAGE.

AN address by Dr. Loewe before the Berlin Medical Association is thus reported in the *Deutsche med. Zeitung*, No. 9, 1889. Hitherto only two methods of bandaging have been known to the aurist, viz., the so-called open method and the boric acid procedure. Neither of these methods answers satisfactorily. Loewe received a hint from a plan adopted in England, to fill the meatus with a kind of cement powder, which hardens into a plug as hard as stone. This is left in its place for months. Then it has to be removed with hammer and chisel. It is evident, however, that under such conditions the secretions of the cavum tympani must stagnate behind the plug and decompose, causing meningitis and abscesses of the brain. Loewe endeavoured so to modify the method as to remove the dangers connected with it. To this end he used, instead of the cement powder, a yielding composition consisting of any disinfectant with gelatine, glycerine, water, and agar-agar. This is introduced while in a fluid state at a temperature of 50° C., into the meatus auditorius externus, where it is solidified into a yielding cylinder. In this way the entrance of microbes from the outer air was stopped, while any secretion from the cavum tympani would dissolve the innermost layer of the cylinder, thus liberating a certain quantity of the disinfectant contained in the composition to disinfect the secretion. But the desired effect was not obtained, for the secretion stagnated just as it had done with the cement plug. Therefore Loewe took the precaution to renew the dressing daily. The great object, however, was to sterilise the products of the inflammatory exudation at the moment of their production. This can be done in an ordinary wound by covering its whole extent with antiseptics and excluding the air. But this is not possible in the cavum tympani for two reasons, viz.: (1) it is possible to reach only the smallest portion of the cavity directly through the perforation, the rest being quite inaccessible to the instrument; and (2) it is impossible to exclude the entrance of air through the Eustachian tube, so that the secretion of the inflamed mucous membrane is always exposed to the attacks of new masses of bacteria. The chief gain from Loewe's experiment was that a way was discovered by which gelatine castings can be obtained of the meatus externus as well as of the surface of the drum, which can very easily be reproduced in plaster-of-Paris. Yet Loewe wished to achieve more than this. He hit upon the thought that he would succeed, if he could but provide for the drainage of the secretion from the cavum tympani. With this end in view, he first thoroughly syringed the ear; then with the help of the speculum and a tube he introduced a piece of sublimate wadding of the size of a pea close up to the drum, and then forced it with another instrument close against the drum. In this way gradually about one half of the meatus was filled with the wadding. Hereupon the fluid in the tympanic cavity was repeatedly forced through the perforation in the drum into the wadding. After the wadding had been removed, the drum lay clean at the end of the dried passage, and in the tympanic cavity there remained but little secretion. To provide for self-acting constant absorption of secretions at the moment of their formation, the passage was again filled with pellets of wadding as before, but this time back to the external opening, even the conch being filled. The wadding was kept in its place by a bandage of some unsized material round the head. In cases of large perforation holes in the drum, care must be taken that the pellets of wadding are made large enough so as not to push through into the tympanic cavity. Instead of wadding, mull, wood-wool wadding, jute, &c., may be used. Three different functions are performed by different portions of this plug. (1). The portion lying against the drum acts as an absorbent of the secretions coming from the tympanic cavity. (2). The middle portion in the passage conveys the secretions outwards; and (3) the wadding in the conch of the ear and the bandage round the head offer a surface for evaporation. It is evident, however, that this method is only of use in cases where there are perforations in the lowest portions of the drum. Of course lower perforations may be artificially produced. But the difficulty may also be met by making the patient lie in bed. The size of the surface of evaporation must be regulated according to the volume of the secretion. Sometimes it is not necessary to fill the conch with wadding. If every precaution has been taken, the drum will be found quite dry and free from irritation when the plug has been removed after twenty-four hours, and though air be forced through the Eustachian tube, not a drop of secretion will come from the tympanic cavity. The second day the bandage is repeated as before, if the perforation is not already closed, as often happens. Except in a very few cases, acute serous inflammation of the tympanic cavity ceases in at most a week, and generally within 24 or 48 hours. And in consequence of the speedy cessation of secretion, immediate cicatrisation of the perforation begins. This method passes by the question of disinfection, and aims at the permanent removal of the products of inflammatory exudation. The advantages are (1) the absolute removal of the danger of the retention of the secretion; (2) the consequent guarantee of complete healing; and (3) the considerable curtailing of the period of healing, The disadvantages, apart from the temporary deafness from the plug, and the irritation caused by it to the drum and walls of the passage, are (1) the greater length of time required by the doctor to fix the bandage, and (2) the danger of the outer bandage becoming wet and causing mischief instead of doing good. For then, instead of being a surface for evaporation, it absorbs moisture, and carries with it the pyogenic and pathogenic substances slumbering, while dry, harmlessly in the middle of the wadding plug, back into the tympanic cavity, there to work mischief. In conclusion, Loewe stated that this method is indicated only for acute serous inflammation of the middle ear, when, apart from perforation, the drum and passage are intact and the exudation of the tympanic cavity is thin. Nothing could be more unwise than to fill the entire meatus auditorius externus with wadding in every case of otorrhœa. If the secretions were of a thick and slimy nature, what would happen? As much as could not be absorbed would lie behind the plug and begin to decompose, thus aggravating the disease. In such cases there is nothing for it but, as heretofore, to provide for the removal of the secretion by frequent syringing. This plugging of the auditory passage has led to a modification of the artificial drum. In case of a dry perforation, a layer of wadding about one millimètre in thickness is carefully pressed against the drum. This soon adheres to the latter, and can be worn by the patient for an indefinite time without any inconvenience, that is to say, if it be not moistened from without as in washing.

Further, this plug has been found to be an excellent means of softening hardened cerumen and cholesteatomata, the latter being a peculiar modification of the former. Wax stoppages occur from the glands and epidermis of the passage, while cholesteatomata arise from the epidermis on the surface of the drum, or that of the innermost portions of the passage, and consist histologically of epithelial cells and laminæ of cholesterin. They may grow to be larger than a nut and implicate the bone. Loewe removes them by first softening them and then syringing. The wadding is saturated in small quantities with oil and is then pushed in tight as in acute serous catarrh of the middle ear. Then, to prevent the oiled plug from slipping out, the opening of the passage is closed with a pellet of wadding dipped in collodium. After the cholesteatoma has been softened by the oil plug for days or weeks, as the case may be, it can be entirely removed by syringing. This applies of course to smaller cholesteatomata that have not yet affected the bone or caused secretive processes. Ordinary stoppages of wax are softened in from 24 to 48 hours, so that they can be removed by syringing.

JOHN ELLIOTT.

ARTICLE 1780.

DITTRICH ON THE BACILLUS OF RHINOSCLEROMA.

THE progress of bacteriological research has demonstrated the parasitic character of many diseases other than the acute specifics, as well as enabled us to determine the true nature of many chronic lesions which surgeons had hitherto looked on as merely abnormal changes in the growth and nutrition of tissue. The most striking example of this line of discovery is presented by the tuberculoses to which we can now with certainty refer such dissimilar lesions as caries of the vertebræ, psoas abscess, hip-joint disease, spina ventosa, and a number of cutaneous affections, while others which had been supposed to be scrofulous (or tubercular) diseases of glands and bones, as actinomycosis, have been differentiated. Among these is rhinoscleroma, which has only recently been recognised as a special affection, and is not to be found in ordinary medical text-books. It shows itself in a progressive development of hard and painless tumours of the mucous surfaces of the nasal and postnasal passages, occluding these more or less completely, causing adhesions between the uvula and palatoglossal arches, or even between these and the posterior wall of the pharynx. The patient rarely seeks advice until respiration through the nose is seriously impeded, when, though extirpation of the growth gives relief, the disease soon reappears. The communication between the mouth and pharynx may at length be obstructed, but even at this extreme and necessarily fatal stage, ulceration, common to all malignant growths, does not occur.

Dr. Paul Dittrich of Prague, having already called attention to this remarkable disease, two cases of which had come under his notice, took advantage of another in the clinic of Professor Gussenbaur last October, to investigate its etiology experimentally, especially as regards the relation between the microbe of this disease and that of pneumonia identified by Friedländer.

His previous conviction that the presence of the hyaline protoplasmic masses, to which he had given the name of cells of Mikulicz, was essential to the diagnosis of rhinoscleroma, being invariably present in it, and some other infective processes as leprosy and glanders, was fully borne out in this case, their number increasing with the progress of the disease until extensive areas were entirely occupied by or composed of them. Under such circumstances they lose their rounded form, and from mutual pressure present the appearance of being traversed by septa. Mibelli, who has observed a single case, rejects this explanation, believing in an actual segmentation of the individual cells, but Dittrich cannot doubt the correctness of his own view. The nuclei, at first clearly recognisable, enlarge, become paler, and at length perish. Within these cells of Mikulicz the bacilli are always to be found, and to their action Dittrich attributes the degeneration of the nuclei. Here, again, he differs from Mibelli, though not doubting that he may have seen hyaline cells, from which bacilli were absent. He has, however, himself failed to observe the larger and smaller hyaline spheres (*Kugeln*) described by Mibelli, Nikiforow, and others.

The easily stained bacilli are distributed between the round infiltrating cells and those of Mikulicz, these latter being sometimes completely stuffed with them.

The most characteristic appearances were presented by gelatine cultures, a nest or colony developing from the size of a pin's head, after forty-eight hours, to that of a split pea after ten days, when, too, a downward growth completed the nail-like form; the colour a translucent grey. Little or no liquefaction of the gelatine followed.

From a careful comparison of all reported observations he is satisfied that the translucent grey capsuled bacillus which he invariably found alone in the hard nasal tumours, and which has been described also by Paltauf and Eiselsberg is characteristic or pathogenic of rhinoscleroma, and specifically distinct from those of a porcelain white colour, described by Babes, Mibelli, Nikiforow, and Weichselbaum, and found also by Dr. Dittrich in the post-nasal and pharyngeal extensions, which are probably identical with Friedländer's bacillus, or at any rate closely allied to it, and common to many acute inflammatory processes.

All attempts to induce the disease in animals by inoculation failed in the hands of our author, but he is not led thereby to doubt the connection between rhinoscleroma and the bacillus in question, merely concluding that animals are insusceptible of infection.

E. F. WILLOUGHBY, M.B.

ARTICLE 1781.

STADNITZKY ON DIPHTHERIA AND ITS TREATMENT.*

DR. STADNITZKY publishes an interesting account (*Sprimon's Meditzïna for* 1886, vol. i., 1888, p. 579; and the *Voĕnno-Meditzinsky Jürnal*, vol. clv., p. 1) on an epidemic of diphtheria at Nikolaiëvsk-on-Amür, East Siberia, which he observed from October 1884 to January 1885, in his capacity as a regimental surgeon. Up to the summer of 1884 the town (which is situated in a rather lonely and healthy locality, on an elevated bank of the River Amür) has been always free from any epidemic infectious diseases. About the time in question, however, nearly 5,000 recruits and soldiers passed through the place on their way from West Siberia towards the seashore, spreading along their route typhoid and typhus fevers, scarlatina, and diphtheria. On his arrival Dr. Stadnitzky found that the latter disease was raging in the town, both amongst adults and children, the infantile mortality being especially high. The local qualified medical *personnel* consisted only of a Government medical officer, with an assistant, side by side with whom there were, largely 'doctoring,' all possible quacks, beginning with shopkeepers and ending with illiterate old women. The exact nature of the fatal disease remained unrecognised; both the 'doctors' and the population were only aware of the fact that a 'throat affection' was prevalent, which was killing children like flies, and was 'inflicted by a hideous two-headed old woman rising from her grave by night and walking from house to house to do her murderous deeds.' The disease was regarded as absolutely incurable. Hence Dr. Stadnitzky's diagnosis, and subsequently his treatment also, were met with much questioning and opposition. With what difficulties his way generally was beset, one can guess from the fact that he was compelled to abstain from any *post mortem* examinations on the ground that the latter 'might give rise to various stupid gossip and even accusations' amidst the population. Nevertheless, his treatment proved eminently successful. It consisted, *a*, in the internal administration of quinine (hydrochlorate or sulphate) in a daily dose varying from 10 to 15 grains to children, and to 30 grains or more to adults, twice daily, in an acidulated solution (1 to 6 acidulated water), for four or five successive days; and, *b*, in painting the fauces with liquor ferri sesquichlorati *Ph. Ross* (1 to 8 of water) six times daily. Twenty-six cases were treated after this method, of which 11 referred to adults (10 soldiers and 1 woman) and 15 to children. In 13 cases an uncomplicated affection existed; in 6 it was connected with scarlatina; in 5 the disease was complicated with parotitis; in 1 it was followed by paraplegia, and in 1 by albuminuria. All the adult patients recovered, while of 15 children, 6 (suffering mostly from scarlatinal diphtheria) died. In successful cases a striking, 'as if magical,' improvement ensued about the third or fourth day of the treatment in adults, and about the sixth day in children, complete recovery taking place in a week in the former and in ten to fourteen days in the latter. The same results had been obtained by Dr. Stadnitzky even in very severe cases of diphtheria, treated during his practice at Ekaterinoslav and St. Petersburg. No unpleasant accessory effects (deafness, &c.) were ever observed by him even when quinine was given in fifteen-grain doses a day, for several successive days, to a girl of three. Dr. Stadnitzky summarises his views on the pathology and therapeutics of diphtheria as follows:—1. Diphtheria represents an acute infectious and contagious constitutional disease which is caused by a still undetermined specific pathogenic microbe, and which can recur in the same person several times [*e.g.* he saw lately a case where the affection recurred in the same child twice within a few months]. 2. The pathogenic microbe first settles down on this or that mucous membrane to multiply in the tissue and to give rise to its necrosis, the morbid products penetrating subsequently into the systemic circulation and causing more or less high fever and other general symptoms. In the absence of any rational treatment the disease is exceedingly liable to end fatally within five or six days. 3. There do not exist any distinct clinical or anatomical varieties or 'forms' of diphtheria, its cases differing one from another only by varying degrees of intensity of the morbid process. 4. 'The disease is highly infectious and serious, but is easily curable, provided a rational medical help is resorted to not later than about the third day; and is absolutely (*absolütno*) curable when the doctor is called not later than the second day of the affection.' 5. Diphtheria may complicate the course of scarlatina, and then 'assumes a much graver aspect than when the disease is associated with albuminuria or other complications of its own.' An increased gravity of the kind is 'dependent simply upon the circumstance that the patient's system, already undermined by the original disease, can only present a diminished resistance to the supervening one.' 6. Children attacked by diphtheria are exposed to incomparably greater danger than adults. 7. The most rational and reliable treatment of the affection consists in an energetic internal use of quinine in solution, and in an equally energetic external one of a strong solution of perchloride of iron. 8. Epidemics of diphtheria can be prevented and arrested by a systematic adoption of certain strict sanitary and hygienic measures, such as—(*a*) an absolute isolation of every patient's house, marked by a black flag on the top for warning purposes; (*b*) cremation of dead bodies, or at least burial in a coffin with lime, on the first day after death, with absence of any mourners; (*c*) a thorough disinfection of the patient's room, bed, bedding, linen, clothes, expectoration, urine and fæces, &c. [According to *Sprimon's Meditzina for* 1886, vol. ii., 1888, p. 710, Dr. Lenaerts also has lately recommended quinine and syrup of rhubarb as the best therapeutic for diphtheria. The writer has not lost a single diphtheritic patient during his practice of twenty-one years' duration. Irrigations with perchloride of iron night and day are highly recommended by Dr. G. Guelpa, *vide* the LONDON MEDICAL RECORDER, October 1888, p. 448.—*Rep.*] V. IDELSON, M.D.

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* Dr. Stadnitzky on Diphtheria and its Treatment. Notes on an Epidemic at Nikolaiëvsk-on-Amür (*Sprimon's Meditzina for* 1886, vol. i., 1888, p. 579; and the *Voĕnno-Meditzinsky Jürnal*, vol. clv., p. 1).

ARTICLE 1782.

REIMER ON SCARLET FEVER AND ITS TREATMENT BY HYDROTHERAPEUTICS AND ANTIPYRETIC DRUGS.*

AT the third general meeting of Russian medical men, Dr. K. K. Reimer, house-physician to the Nikolaëvsky Hospital for Children, St. Petersburg, read (*Transactions of the Meeting*, 1889, Nos. 2 and 7, pp. 53 and 234) a valuable paper on scarlatina, based on 3,640 cases with which he had met during the period of 1868–88, both in his hospital and private practice. The first division of his monograph is dedicated to the study of fever. He classifies the cases as follows:—

(*A.*) *Simple or incomplicated scarlatina.* (*a.*) *Mild form* (61 cases = 1·1 per cent. of the total number). During a few first days of the rash the temperature oscillates at a febrile height, but hardly ever reaches 39° C., while subsequently it becomes normal ('subfebrile'). In general, the course of the temperature resembles that in roetheln, the only difference being its tendency to slight re-elevations. The course of the affection itself is mild, sore-throat trifling. The mortality = 0.

(*b.*) *Severe form* (211 cases = 5·7 per cent.). In twenty-four hours the temperature rises to 41° C., to keep at that level for three or four days. The mortality amounts to 83·7 per cent., death ensuing either at the high temperature or after a rapid fall below the standard.

(*B.*) *Complicated scarlatina.* (*a.*) *Mild form of a moderate duration* (317 cases = 9·1 per cent.). For from two to four days the temperature oscillates about 40° C., and then tends to sink. The fall, however, is soon interrupted by slight and evanescent rises, caused by mild complications, such as follicular angina, mild diphtheria, &c. The characteristic differential feature of the variety is constituted by the frequent occurrence of a critical fall of the temperature. The mortality = 2 per cent.

(*b.*) *Graver form of moderate duration* (468 cases = 13·5 per cent.). The temperature continues to oscillate about 39° C. up to the fourteenth or even seventeenth day. The mortality = 7 per cent.

(*c*). *Mild form of a rather protracted character* (339 cases = 9·7 per cent.). Once the *fastigium* over, the temperature but seldom rises above 39° C., and, about the 21st day of the disease, returns to the normal level, the complications being of a non-malignant nature. The mortality = 5·6 per cent.

(*d*). *Severe form of a rather protracted characte* (682 cases = 18·7 per cent.). The temperature continues to keep at a moderate febrile height up to the 24th or even 28th day, which is dependent upon some grave complications, such as pericarditis, endocarditis, nephritis, &c. The mortality = 39·3 per cent.

(*e*). *Mild form of a prolonged duration* (419 case = 12·1 per cent.). A continuous fever is present, with obstinately recurring re-elevations caused by more or less mild complications. In favourable cases, recovery ensues between the 34th and 40th day. The mortality = 26·5 per cent.

(*f*). *Severe form of a prolonged duration* (371 cases = 10·7 per cent.). From the beginning to the end the temperature keeps at about 40° C., with short remissions depending upon grave complications, such as erysipelas, pyæmia, gangrenous diphtheria, &c. The mortality = 80·0 per cent.

The next part of the author's work deals with oscillations in the child's weight, observed under various conditions. In all, 18,976 weighings were made in 968 cases.

A. Expectant Treatment (344 cases, referring t 196 boys and 148 girls). 1. In the course of fever girls lose in their weight, in average, $\frac{1}{24}$ less tha boys. 2. In mild cases, the loss is trifling. 3. Bu in severe ones, during a few first days of the efflorescence, the loss may amount to from 600 to 1,00 grammes, and even more, which is caused by vomiting, diarrhœa, and defective systemic nutrition A total loss may reach, in from 7 to 10 days of fever from 2,000 to 2,500 grammes (or even more). 4 In protracted cases, associated with a more or less obstinate fever, the loss proceeds much more slowly but at the same time more steadily, so that the chil may lose in a month or so as much as $\frac{1}{7}$th of it original weight. 5. The loss, however, is not of a strictly progressive character, but may be interrupte by some increase or decrease, according to the course of fever and systemic nutrition.

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* REIMER, DR. K. .—A Contribution to the Study of Fever in Scarlatina. (*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, 1889, Nos. 2 and 7, pp. 53 and 234.)

B. Antipyretic Treatment (624 cases).—1. In cases with a constant high fever, antipyretic drugs prove to be powerless to check loss of weight. 2. Hydrotherapeutic means, however, seem to show some controlling influence on the loss. The remaining, and by far the most important portion of the paper, embodies the results of a comparative study of various antipyretic methods.

I. *Hydrotherapeutics* (978 cases of a grave or hyperpyretic character).—1. *Cold compresses* to the head, neck, chest, and abdomen, as well as *cold ablutions* of the whole body, have solely a sedative action on the nervous system, but do not exercise any influence on the course of fever. 2. *Cold packs* (28 cases with intense nervous excitement) fail to depress a high temperature, and even are sometimes followed by a still further febrile rise, and not infrequently by cyanosis and failure of the pulse. Prolonged (several hours') packings 'not unfrequently give rise to lethal collapse.' 3. *Cold packs with cold irrigations* (131 cases) give satisfactory results in regard to the pulse, cyanosis, and respiration only, but show a but very trifling influence on the fever. 4. *Cold packs with cold irrigations in a gradually cooled bath* (96 cases) act in the same way, but more rapidly. Fairly frequently, however, they cause collapse. 5. *Tepid baths* (72 cases) are useless, and, when lasting for more than half-an-hour, even decidedly harmful, since they cause weakness of the pulse and cyanosis. Those unwelcome symptoms may be neutralised by cold irrigations. 6. *Baths at* 28° *R. gradually cooled down to* 22° or 20° (186 cases) cause collapse and sudden death by far more frequently than other hydrotherapeutic means. 7. *Cold baths at* 18° *or* ° *R.* (or even 14° to 20°), of from five to eight minutes' duration, accompanied with energetic frictions of the whole body (363 cases), give relatively most satisfactory results: they secure a decrease of the temperature amounting to 2° C., as well as a considerable improvement of the pulse and respiration. 8. On the whole, the selection of this or that method is determined by the patient's age and individual peculiarities of his case. Cold baths alone exercise a powerful and beneficial action on the nervous system, and especially on the circulatory nerve-centres.

II. *Antipyretic Drugs.*—1. *Quinine* (148 cases) administered internally, or under the skin, or in enemata, has no influence on the temperature during the period of efflorescence, but acts somewhat better in that of defervescence. 2. *Salicylate of Soda* (31 cases) proves to be utterly inactive in regard to the temperature, but exercises a decidedly injurious action on the heart—increases cyanosis, &c. 3. *Kairin* (36 cases) acts on the heart still more harmfully, and, in addition, retards the respiration, while manifesting scarcely any influence on fever. 4. *Thallin* (48 cases) is utterly unreliable and inconstant in its action on the temperature: in some cases it does not lower it at all, while in others it causes a subnormal fall accompanied by grave collapse. 5. *Antipyrin* (684 cases) has no influence whatever on the course of the disease itself, and fails to depress the temperature during the stage of efflorescence. Still, 'it proves to be distinctly beneficial in protracted cases, in virtue of its successfully counteracting the injurious process of tissue combustion.' Besides, 'it seems to enable children to better cope with severe complications of scarlet fever.' Taking all in all, antipyrin deserves preference over all 'other antipyretic drugs, its main advantage being a comparative freedom from unpleasant accessory effects.' Perspiration and sickness are said to be observed only when the drug is employed in unduly large doses. 6. *Antifebrin* (522 cases) is, on the whole, similar to antipyrin; but its use requires a still greater caution, since it is apt to induce various untoward phenomena. Especially in patients suffering from cardiac disease the drug exceedingly easily gives rise to cyanosis and collapse. [In the course of a discussion Dr. I. M. Neustab, of Ekaterinoslavl, stated that he obtained very good results in scarlatina from baths at 20° or 22° R., of from ten to fifteen minutes' duration. The disease ran a distinctly better course, and renal complications were observed far less frequently than under all other methods.—*Rep.*] V. IDELSON, M.D.

ARTICLE 1783.

RICHTER ON DIET IN NERVOUS AFFECTIONS OF THE STOMACH.

IN the *Deutsche med. Zeit.*, No. 9, 1889, Dr. Richter, of the Hydropathic Establishment at Sonneburg, in Thüringen, directs attention to the dietetic treatment of central nervous disturbances of the stomach, that is, of affections of a purely nervous character which are not caused by local mischief, and in which the chemistry of the stomach is not altered. He bases his remarks on his experiences with a number of emaciated neurasthenic subjects, both male and female, who when suffering from stomach difficulties had been much reduced in body and mind by exclusive and deficient diet. It is found that in cases of neurosis the visceral symptoms of the disease were generally detected in the heart chiefly, and nearly as frequently in the stomach.

If in neurosis of the brain and spinal cord the innervation of the stomach is centrally disturbed, the symptoms will be chiefly neuralgia, cramp, paralysis of the stomach and vaso-motor and trophic disturbances of the latter (catarrh). The paralytic symptoms of the stomach are usually put down to atonia and frequently to dilatation. The forms of neuralgic affection and catarrh are well known. Neuralgia, cramp, and paralysis of the stomach occur together, and are often further complicated with catarrh, which, however, may again be caused merely by central lesion of the vaso-motor centres. All these disturbances may subsist with a normal or an abnormally small or excessive appetite. Until very recently the rule was to prescribe careful diet, chiefly animal food and in a small volume, *e.g.* milk, eggs, and easily digestible meat, while vegetable and fermentable food was restricted to a minimum. The result of such treatment was that the patient lost in weight, fat, and blood formation. Richter has found the new theory correct, that these forms of neuralgia, cramp, and paralysis of the stomach as well as nervous catarrh require an abundant and strong diet of mixed animal and vegetable food, while no indigestion has been caused thereby. The positive advantages of such a diet are the formation of fat, improvement of the composition of the blood, an increase of weight, and a decrease of the local troubles. This is in contrast with the effects of such a diet in cases where there is primary catarrh of the stomach, in which strong mixed diet increases the gastric disturbances. This is a proof that primary catarrh of the stomach rests on a pathological basis different from that on which central neurotic catarrh of the stomach rests. Richter then enters upon an explanation of the causes of the harm done by reducing the diet and of the advantages of the opposite regimen. These effects depend (1) on direct or local influences; (2) on indirect influences of the diet, and (3) on considerations of a psychical nature.

While in neuralgia and spasmodic affections of the stomach direct stimulation by voluminous ingesta is needed only in a minor degree, it is of the first importance in the case of the paralysed (atonic) organ as well as in one that is affected with nervous catarrh. As in centrally caused constipation, *i.e.* paralysis of the intestine, small quantities of exclusively animal food make matters worse, while an improvement is effected in the peristaltic contraction by a judicious mixture of animal and vegetable food; in the same way the innervation of the sluggish walls of the stomach demands a similar stimulus by a voluminous diet, if the atonia is to disappear. The same is true of the innervation of the gastric mucous membrane that is affected with nervous catarrh. Sometimes the nervous objections of the patients to a strong diet have to be overcome; but, this done, Richter has always found the result to be satisfactory. Nor is it, as a rule, necessary to arrange for a gradual transition from one form of diet to the other.

The indirect advantages of a strong, mixed diet in nervous affections of the stomach are even greater than the direct. The causes of central neurotic disturbances are mostly anæmia and nutritive disturbances of the central nervous system, the latter being caused by the former. If, then, the centres of innervation of the stomach be disturbed in their nutrition, nervous stomach troubles follow. It is evident, therefore, that reduction of diet must cause deterioration in the composition of the blood, disturbance of general nutrition, with loss of weight, and consequent disturbance of nutrition in the central nervous system, which again must lead to an increase of the stomach troubles. Whenever, therefore, the nutrition of the brain and spinal cord appears to be bad, give plentiful and nourishing food, instead of complicating the disease by stinting in food. Further, it must be observed that the prescribing of a painfully careful and exclusive diet has often a bad psychical effect in cases of hypochondria and neurasthenia. Such patients, who are generally very introspective, are encouraged in their fancies as to what is good for them, and may easily come to take next to no nourishment. This anxiety about their diet irritates the brain, and, through it, the action of the stomach. Therefore tell such patients to eat nearly anything. They are often very perverse. Some have a revulsion against meat, others have an insuperable inclination to take acid food. By attacking such perverse inclinations you will help to strengthen their will and power of resistance.

The increase of weight must be carefully registered. In anæmic, badly-nourished subjects it is of great importance, for even with corpulent subjects a loss of weight has a bad effect on the nervous symptoms. In conclusion, Richter gives the following case: Herr N. N——, aged about 38 years, was suffering from hereditary neurotic troubles. Vertigo, palpitation, sleeplessness, headache, pains in the back, great lassitude, pains in all his limbs, and considerable emaciation were his symptoms. He was always thinking of his condition, and his general condition of mind was hypochondriac and hopeless. For some time there had been chronic catarrh of the stomach—viz., eructation, a furred tongue, and a feeling of pressure on the stomach. He complained, too, of constipation. He had an appetite, but only ventured to eat finely-shredded meat, eggs, bouillon, &c., since he had been recommended by his doctors to be very careful with his diet. Richter recommended sitz baths, mountain air, strong mixed diet, and an attempt to control his fears with regard to diet. The patient soon found that the abundant and strong diet did him no harm; in a week he gained 4 lbs. in weight. The other symptoms yielded to a treatment lasting two months. His tongue was no longer furred, and he had gained in weight 26 lbs. JOHN ELLIOTT.

ARTICLE 1784.

ANDERSON AND MAKINS ON CRANIO-CEREBRAL TOPOGRAPHY.*

THIS interesting paper will well repay the study of anatomists and surgeons. The authors in the first place make the following important practical remarks. 1. The cranial sutures, ridges, and eminences accepted as a guide to the convolutions and sulci, are sufficiently variable as to their position in relation to each other and to the cranial walls as a whole, to introduce an undesirable source of fallacy in brain surgery. The eminences most easy of definition are the glabella, the external angular process and the external occipital protuberance; these also are subject to irregularities of position, but too small to be snrgically important. 2. The relations of the cerebral convolutions and sulci to the cranial surface and to each other vary within rather wide limits in different subjects, and even upon the two sides of the same head; fixed and invariable points of localisation are therefore impossible. 3. Most of the fissures and convolutions are very capricious in their course.

The authors take three guiding lines for the localisation of the fissure points, viz.: *sagittal*, extending from the glabella at a point midway between the highest points in the supraorbital arches to the external occipital protuberance; *frontal*, from the mid-point of the last to the depression immediately in front of the tragus, at the level of the upper border of the meatus; *squamosal*, passing obliquely from the most prominent point of the external angular process, at the level of the superior border of the orbit, to the junction of the middle and lower thirds of the frontal line, and prolonged for about an inch and a half behind this. Certain points are also taken, thus, glabellar and inial form the extremities of the first line, and mid-sagittal its centre. Preauricular is at the commencement of the second and squamosal at the point where it intersects the third, the two ends of which are designated as angular and parietal. With these points, the following directions for finding the fissures are given.

Fissure of Rolando.—The upper extremity, carried for convenience as far as the longitudinal fissure, lay in all cases between the mid-sagittal point, and a point three-quarters of an inch behind it. Its distance behind the mid-sagittal point, however, bore no constant relation to the length of the sagittal line, and hence the central point for the application of the trephine may be most safely fixed at three-eighths of an inch behind the mid-sagittal point. The lower end of the sulcus, carried into the fissure of Sylvius, lies in the squamosal line between the junction of this line with the frontal line (squamosal point), and three-quarters of an inch in front of this. The centre of the trephine may hence be applied in the squamosal line, three-eighths of an inch in front of the squamosal point. The authors note the extremely capricious course of this fissure, and give some interesting illustrative tracings.

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* ANDERSON, W., and MAKINS, G. H. Experiments in Cranio-Cerebral Topography. *Journ. of Anat. and Phys.*, vol. xxiii., p. 455.

Fissure of Sylvius.—The place of commencement is difficult to fix with exactness, but for all practical purposes it may be located in the squamosal line, between 1⅛ inch and 1½ inch behind the external angular process, or about five-twelfths of the distance between the point and the frontal line. The bifurcation of the fissure lies in the squamosal line, at a point from 1½ to 2 inches behind the external angular process, or at seven-twelfths between this process and the frontal line. The course of the horizontal limb from the bifurcation to the frontal line corresponds closely to the squamosal line, and a continuation of this backwards for an equal distance behind the frontal line (to parietal point); it then turns upwards for about one-half of an inch in a direction parallel to the frontal line. The mode of termination of the fissure was so uncertain, that a circle of an inch in diameter failed to cover all the variations in the twenty subjects examined by the authors. The parietal eminence was nearly always closely related to the point in question.

External Parieto-Occipital Fissure.—This joins the longitudinal fissure at a point averaging seven-twelfths of the distance measured from the mid-sagittal point to the external occipital protuberance, and lies near to the apex of the lambdoid suture. Finally, the authors remark that in operations near the longitudinal fissure, it is necessary to take into consideration the width of the superior longitudinal sinus, and its frequent deviation towards the right side in the posterior half of its course.

Bertram C. A. Windle, M.A., M.D.

SURGERY.

RECENT PAPERS.

1785. Chaput, Dr.—On Fractures of the Patella (*Etude expérimentale et clinique sur le mécanisme des fractures de la rotule*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 809.)

1786. Ménard, Jos.—On Fractures of the Vertebral Column (*Recherches expérimentales sur le mécanisme des fractures indirectes de la colonne vertébrale*). (*Bull. de la Soc. Anat. de Paris*, 1889, p. 208.)

1787. Huchard, M. Henri.—On a Precaution to be taken after giving an Injection of Morphine. (*Rev. Gén. de Clin. et de Thérap.*, April 4, 1889.)

1788. Regnault.—On Chloroform and Ethylic Alcohol.

1789. Schmiegelow.—Thirty Resections of the Mastoid Process. (*Nordiskt Medicinskt Arkiv*, Band xx., No. 9.)

1790. Senn.—On Wounds of the Intestine. (*Illustrated Med. News*, April 1889, p. 7.)

1791. Arnold.—A Case of Bronchocele. (*Illustrated Med. News*, March 1889, p. 270.)

1792. Prince.—On Epilation by Electrolysis. (*Amer. Jour. of Med. Science*, May 1889, p. 479.)

1793. Berry.—A Case of Elephantiasis of the Arm following a Severe Burn. (*Prov. Med. Jour.*, May 1889, p. 284.)

1794. Mazzucchelli, A.—Traumatic Muscular Hernia of the Right Thigh. (*Gazzetta degli Ospitali*, No. xiii., 1889.)

1795. Nigrisoli.—Ununited Intra-capsular Fracture of the Neck of the Femur cured by Scraping the Ends of the Bone and the Introduction of a Bundle of Metallic Threads. (*Kif. Med.*, p. 1124, 1888.)

1796. Jakimovitch, Dr. N. N.—On Peat Moss as a Dressing Material. (*Voĕnno-Meditzinsky Jŭrnal*, June 1888, p. 75.)

1797. Tiling, Professor Gustav F.—Case of Excision of Horseman's Bone (*Reitknochen*). (*St. Petersburger med. Wochensch.*, No. 10, 1888, p. 90.)

1798. Fink, Dr.—On the Operative Treatment of Cancer of the Breast. (*Prager Zeitschrift für Heilkunde*, vol. ix., part 6.)

Art. 1785. *Chaput on Fractures of the Patella.*—At the end of his paper Dr. Chaput gives the following classification of fractures of the patella. *A. Direct Fractures.*—1. *By Fall on the Knee.*—The patella is only exposed to injury in a fall on the knee when flexion exceeds a right angle slightly. In slight and in complete flexion fracture is impossible. Fractures so produced are almost always comminuted. Fracture by fall on the knee may be accompanied by fracture of the femur at its middle or inferior portions. 2. *By a Blow from a Blunt or Sharp Body.*—Fractures caused by a blunt body are always comminuted. Those due to the blow of an angular body may be comminuted or transverse, with or without lesion of the skin. *B. Indirect Fractures.*—Fractures caused by tearing. It seems to be impossible to obtain these in the dead body. They are apparently favoured in the living body by fragility of the bones. This is rendered probable by the author's observations (persistent anterior disease, enlargement of the patella, &c.) and by the numerous cases of simultaneous, bilateral, and repeated fractures. *C. Mixed Fractures.*—These fractures are probably favoured by senile fragility of the bones. The average density of 7 young subjects is 1·37; that of 8 old, 1·26. *D. Pathological Anatomy of Transverse Fractures with Separation.*—Separations of 2 centimètres or less are not accompanied by extensive laceration of the fibrous tissue in front of the patella, or of those situated at its sides (lateral expansions of the biceps femoris). When the separation exceeds 2 centimètres, lateral ruptures of tissue occur, and, moreover, fibrous shreds are interposed between the fractured surfaces. Considerable separations of 6, 8, 10 centimètres cannot be obtained upon the dead body. They are consequently not primary, but are due to the slow contractions of the rectus femoris.

1786. *Ménard on Fractures of the Vertebral Column.*—This paper is an account of a series of experiments on the mechanism of production of fractures of the vertebral column made in the early part of this year, the results of which are thus summarised. 1. In falls on the neck, the head remaining flexed, the fracture always occurs in the dorsal region of the column. 2. At the same time, a fracture may occur in the dorso-lumbar region, but it is less constant. 3. Dorsal fractures are accompanied most often by fractures of the ribs, sometimes only by luxation of their heads. 4. In falls on the buttocks, the inferior extremities being flexed on the thorax, the fracture is localised in the lumbar or dorso-lumbar region. 5. The intervertebral discs are less resisting than the vertebral bodies, when the resistance of the posterior arch is suppressed. From a consideration of 282 observations of fractures collected by the author he also concludes: 1. That there is an enormous disproportion between the fractures of the twelfth dorsal and first lumbar vertebræ, and those of the other vertebræ of the dorsal and lumbar regions. 2. That fractures of the dorsal region properly so called are much more frequent than the classical descriptions would lead one to suppose. In fact, if the fractures of the ten upper dorsal vertebræ be added together they amount to 151, as opposed to 232 fractures of the two last dorsal and the five lumbar. 3. Finally, that in the superior dorsal region the fifth vertebra is distinguished from its neighbours, which is probably due to its anatomical situation at the most contracted point of the dorsal column.

Bertram C. A. Windle, M.D.

1787. *Huchard on a Precaution to be taken after giving an Injection of Morphine.*—M. Huchard, in his fortnightly notes on therapeutics, points out how necessary it is, after giving a hypodermic injection of morphine, to maintain perfect silence in the room where the patient is lying. Morphine, far from suppressing sensitiveness like chloroform, rather tends to exalt the excitability and particularly the liability to disturbance from slight noises. This peculiar exaltation of excitability is most marked in the frog, but may also be noted in other animals and in man, though the fact does not appear to have received proper attention hitherto. The failure of morphine injections to procure sleep is, in the majority of instances, due to neglect of this simple precaution.

Alfred S. Gubb.

1788. *Regnault on Chloroform and Ethylic Alcohol.*—At a recent meeting of the *Académie de Médecine* M. Regnault drew the attention of the Académie to an English preparation, improperly designated as chloride of methylene. This substance is merely a mixture of chloroform and ethylic alcohol (three-fourths of chloroform to one-fourth of alcohol), which has been employed with excellent results in obtaining anæsthesia during surgical operations by Sir Spencer Wells and M. Le Fort. The most minute precautions are required in employing it. As to chloride of methylene, which is quite a different substance, experience has proved that its use is followed by such serious accidents that it should be proscribed as a therapeutical agent.

W. Vignal.

1789. *Schmiegelow on Thirty Resections of the Mastoid Process.*—Dr. E. Schmiegelow gives an account of thirty cases of resection of the mastoid process. The patients operated upon were of different ages, from one year to fifty. In twelve cases there were acute symptoms; in eighteen the inflammation was chronic. A subperiosteal abscess was observed in seven cases. In five of the acute cases the caries was superficial; in five others the disease was limited to the interior of the mastoid process. In two of these five there were fistulous passages from perforation of the cortical layer. In two cases the mastoid cells were filled with pus, without softening of the bony tissue. In twelve cases of suppuration of the middle ear, operation was followed by a complete cure. In one of these cases the patient died from an embolism of the pulmonary artery, which could not be attributed to the operation. Of the eighteen chronic cases, in eight the caries was very deeply situated, not extending beyond the walls of the mastoid cavity. The process was sclerosed in three of these cases. In one case the cochlea was displaced across the auditory canal. In six cases the caries had attacked all the process except the outer substance, which was only perforated by a fistulous passage in two of these six cases. In three cases there was found a central caries, surrounded by a sound cortical substance, and without communication with the middle ear. A table is given in Dr. Schmiegelow's paper classifying the results of the operation. During the operation, in six cases the dura mater was visible at the bottom of the wound. In two cases an abundant hæmorrhage resulted from a wound of the lateral sinus. One of these patients died suddenly on the seventh day. After the operation, after-recovery was apparently assured. In the five which remained the cure was complete. In one case a large epidural abscess was opened with success. In seven cases (23 per cent.) only by irrigation could it be shown that a communication existed between the wound and the middle ear. In the other twenty-three (77 per cent.) no communication was present. Amongst the seven first cases one was fatal; amongst the others three were cured; while the suppuration of the middle ear continued in three cases. Of the twenty cases in which there was no communication eleven were cured by cessation of the middle ear suppuration, while it continued in the nine other cases. After the operation the treatment consisted in irrigation with corrosive sublimate solution, and the wound was tamponed with iodoform gauze. All through, sublimated wool was used. As a rule, the dressing was only changed after six or eight days. In the sixth and nineteenth cases erysipelas showed itself.

W. W. Ireland, M.D.

1790. *Senn on Wounds of the Intestine.*—In the *Illustrated Med. News*, April 1889, p. 7, attention is drawn to a series of experiments made by Dr. Senn, of Chicago, as to the best plan of overcoming the difficulty of examining the whole length of the bowel in cases of wounds of the intestine. It has been suggested that hydrogen gas should be pumped into the rectum, and made to find its way out through the intestinal wounds, for the purpose of establishing their situation. First he determined how far the intestine is permeable to gas; secondly, the action of that gas on the tissues of the body; thirdly, the force required to overcome the resistance of the ileo-cæcal valve; and lastly, the value of inflation by hydrogen gas as a test for perforation. It appears that this gas travels more readily upwards from the anus to the mouth than downwards in an opposite direction; and hence this plan should be adopted, unless there be reason to suspect the injury is in the stomach or duodenum. It only requires a pressure of 3 lbs., and oftentimes much less, to force the gas right through the alimentary canal from the anus upwards. The gas should be introduced from a large rubber balloon having a cubic capacity of 16 litres. No rupture is likely to take place, unless the pressure rises as high as from 12 to 15 lbs. Hydrogen gas is better than ordinary air, first on account of its lightness, and secondly, it is entirely devoid of all noxious properties, and is rapidly absorbed by the tissues. The passage of gas through the ileo-cæcal valve can always be detected externally by a gurgling sound. In one case Dr. Senn employed this method, and was able to detect a very large number of apertures, and when they were sutured the patient made an excellent recovery. This plan deserves a further trial ;in this country, and the experience of other surgeons is sure to be anxiously looked for.

1791. *Arnold on a Case of Bronchocele.*—In the *Illustrated Med. News*, March 1889, p. 270, Mr. Arnold, M.B., contributes some notes of a case of bronchocele lately under the care of Mr. Symonds. The patient was a boy, aged 16, and was admitted into the infirmary on Nov. 21, 1888, suffering from dyspnœa. His breath had been short for the last three days ; he first noticed a difficulty in breathing about two months before. No cause could be detected, except a slightly enlarged thyroid gland. Lateral pressure on the lobes of the enlarged gland increased the dyspnœa markedly, while pressure on the isthmus from before backwards relieved it. During the night of the 21st the patient was very restless, and at noon on the 22nd the dyspnœa was so extreme that tracheotomy was performed. A full-sized Golding Bird's tube was introduced, but it did not give complete relief, and a flexible gum elastic tube, about the size of a No. 11 catheter, was passed down inside the silver tube till its mouth was about 2 inches below that of the latter. So long as this was *in situ* he breathed perfectly well, but when it was removed and the tracheotomy tube alone remained, there was always a very uncomfortable amount of dyspnœa. Accordingly, on December 4, Mr. Symonds decided to cut down and dissect out the right lobe of the enlarged thyroid gland ; the lower end of the lobe dipped down for about an inch behind the sternum, and closely embraced the trachea. Two days after the operation the tracheotomy tube was removed, and never required to be replaced. The boy left the hospital on January 2 in perfect health.

1792. *Prince on Epilation by Electrolysis.*—In the *Amer. Jour. of Med. Science*, May 1889, p. 479, Dr. Morton Prince gives his experience in the use of electrolysis for the removal of hairs. In the hands of experienced operators this method is often very successful, and hardly any scar can be detected. The principal reasons for disfigurement are currents unnecessarily strong, or applied too long. It is absolutely necessary to emply a galvanometer in the circuit, so that the current may be precisely regulated. The author always employs a powerful battery (80 to 100 cells) of high electromotive force, and introduces into the circuit a rheostat, producing a resistance of at least 20,000 ohms. By this means the strength of the current does not vary to any marked degree should any change take place in the state of moisture of the skin or electrodes. As to the time the current should be used, for the upper lip from three to five seconds often suffices with a current of 1 milliampère ; a current of 3 milliampères is seldom exceeded even in very coarse hairs, and these may require the current to act for fifteen to twenty seconds. In operating upon vascular tumours of the skin, moles, nævi, &c., the same methods and precautions should be used.

1793. *Berry on a Case of Elephantiasis of the Arm following a Severe Burn.*—In the *Provincial Med. Jour.*, May 1889, p. 284, Mr. Berry records a case of elephantiasis of the arm in a man aged 60. Twelve years previously he burnt his hand and forearm, which suppurated for a long time, but eventually healed with much enlargement and hypertrophy of the tissues. When seen he was very feeble, with a marked cachectic appearance, and with albumen in his urine. After some deliberation the patient consented to an operation being performed ; he was accordingly placed on a liberal diet for a few days, with a stimulant, then the arm was removed at the junction of the upper and middle third ; this being necessitated by the skin above the elbow being implicated. The patient was very feeble for a few days, but he soon recovered, and the wound almost healed by first intention. A very good drawing is given of the hand, which must have been a dreadful hindrance to the man, and at his age it was fortunate for him to recover from the operation. The amputated limb was sent to the museum at Owens College. RICHARD NEALE, M.D.

1794. *Mazzucchelli on Traumatic Muscular Hernia of the Right Thigh.*—G. B., 25, carpenter, admitted June 1888 into the civil hospital of Pavia, for a tumour of the right thigh. He gave the following history :—In the preceding February he was wounded with a scythe in a quarrel, on the exterior and anterior surface of his right thigh. The wound was sewed up, but suppurated ; it had quite healed after 47 days, but a tumour commenced to develop in the cicatrix. On admittance, the tumour occupied the middle of the anterior external region of the right thigh, over the belly of the vastus externus ; it was hemispherical in form, reducible, and became very apparent when the muscles of the anterior surface of the thigh contracted. When the tumour was reduced, under the cicatrix an elliptical opening was felt, 7 centimètres long, in the fascia lata, through which the muscular fibres protruded. Standing on the right leg, and walking, especially caused pain of the thigh and outer side of the knee. The case was evidently one of traumatic muscular hernia of the vastus externus. And although traumatic are more frequent than spontaneous muscular hernias, yet this is perhaps the first hernia of the vastus externus on record. Treatment : after chloroform and Esmarch bandage, an incision of 9 centimètres was made over the tumour discovering the opening in the aponeurosis. The muscle showed no apparent alteration. The margins of the aponeurotic opening were refreshed, the hernia reduced, and the opening closed with nine points of interrupted catgut suture. The skin wound was united with silk suture. In 21 days the patient left the hospital cured.

1795. *Nigrisoli on Ununited Intra-capsular Fracture of the Neck of the Femur : Cure.*—V. C., 36, admitted January 1888, nineteen months after the accident. Complained of intense pain on movement, and spontaneous frequent jerks, especially at night. Limb wasted, position normal, slight shortening. Flexion and extension of the thigh on the pelvis almost impossible ; limited power of rotation and abduction. On rotation patient feels slight grating, rarely to be felt on palpation. Left gluteal region flattened, the fold of the buttock almost disappeared, left half of the pelvis higher. On Feb. 15 Professor Loreta made a long incision behind the great trochanter, exposing the capsule of the joint. An intra-capsular fracture was found, without displacement. The capsule was incised, and the fibrous tissue uniting the fragments, Ollier's scraper introduced between the two fragments, and the opposed surfaces carefully refreshed. Between the fragments a bundle of 8 to 12 metallic threads were placed, their extremities being brought to the lower angle of the external cutaneous wound. The wound was then well irrigated, a drainage-tube placed, sutures deep and superficial, and sublimate dressing applied. The limb was immobilised by a long lateral external splint. After five days the metallic wires were withdrawn. The patient made an uninterruptedly good recovery, and on the fifty-first day was discharged. G. D'Arcy Adams, M.D.

1796. *Jakimovitch on Peat Moss as a Dressing Material.* — In the *Voënno-Meditzinsky Jürnal*, June 1888, p. 75, Dr. N. N. Jakimovitch, of St. Petersburg, publishes an interesting paper on moss as a material for surgical dressing. The high absorbent powers of various mosses, especially of the peat moss (*sphagnum*), have been utilised by inhabitants of Northern regions from time immemorial. Thus, according to Drs. A. F. Middendorf and A. E. Nordenskiold, the Samoiëds and Tchuktchis employ moss for preparing lamp-wicks and as a bedding material for infants. [Similarly, Dr. E. J. Pokrovsky, of Moscow, in his invaluable medico-anthropological monograph on the *Physical Development of Children* (1884), p. 188, says that a soft and dry moss is employed as bedding for infants' cradles by Laplanders, Lithuanians, Tcheremisses and Samoiëds. The latter, however, use the material for the purpose only in summer time, while in winter they prefer to place their infants on a thick layer of a coarsely-powdered, soft and dry rotten birch-wood. The moss litter is changed several times a day. By its use the infant's bed is kept in a very clean and generally healthy state.—*Rep.*] As a material for surgical dressings moss was introduced first by Professor Leisrink in 1882, whose recommendation was soon followed by similarly favourable communications emanating from Drs. Hagedorn, Milk, Korach, Neshel (*vide* the London Medical Record, 1885, p. 336), H. A. Lediard (*see* the *British Med. Jour.*, Oct. 18, 1887, p. 829), &c., and referring mainly to the peat moss. The latter grows abundantly over marshy and low districts of the Northern regions of Europe, Asia, and America. In Germany nine species of the *sphagnum* only are found (as Hagedorn states), while in North Russia the natural family *sphagnaceæ* has fourteen representatives (*vide* Dr. Ivanitzky's paper in the *British Med. Jour.*, 1887, vol. ii., p. 492). As is known, the peat moss constitutes the most essential ingredient of the peat or turf which has been similarly recommended as a surgical dressing by Professors Esmarch, Neuber, and Trendelenburg. The so-called 'vegetable felt,' which is largely used (especially in a powdered form) all over West Russia for disinfecting middens, privies, &c., is nothing more than a compressed peat-moss. The Russian literature contains a whole series of papers dealing with peat moss as a material serving for the latter purpose (Leshtchinsky, Necki, Milzer, Uspensky, Bekarevitch, &c.), but the researches concerning the substance as a dressing material are yet but scanty. Meanwhile, the matter presents a great practical interest, since the moss-dressing, being cheap, is employed in many hospitals and in country practice, and there is every probability that it will be used on a gigantic scale at the very first opportunity under the form of some wholesale international thrashing, commonly named 'war.' At all events, considerable piles of the material are stored in various nooks and corners, and many specimens of problematical value are in the market. One of the specimens has been recently handed over for examination to Dr. Jakimovitch by Dr. N. A. Vilchkovsky, the senior surgeon of the St. Petersburg Nikolaëvsky Military Hospital, who received it from the Russian Red Cross Society. Macroscopically, the specimen proved to represent a fairly dense, but exceedingly light and expansive mass, of a light brown colour, with coffee-brown spots, consisting of minute twigs and fibres of the *Sphagnum subsecundum*, *S. nemoreum*, and *S. Girgensohnii*, with a copious admixture of broken branches, roots, and leaves of some foreign plants (shrubs and herbs). The general conclusions drawn by the writer from his experiments are as follows: 1. Moss as a dressing material cannot be regarded either as an aseptic or antiseptic. 2. Being extremely friable, it easily breaks into powder. Hence it is apt to fall out of pads, to soil linen, and to give rise to displacements of the whole dressing applied. 3. Being excessively voluminous and light, it is inconvenient in regard to transportation, especially in war time. 4. Its absorptive power, however, is very considerable. 5. To become fit for use in the capacity of an aseptic and antiseptic dressing, it must be previously subjected to a special treatment. [In his communication on peat moss in the shape of 'vegetable felt,' Dr. A. J. Leshtchinsky alleges (*Transactions of the General Meeting of the Russian Railway Medical Men*, 1886, p. 57) that the material possesses powerful disinfecting or parasiticide properties. However, Dr. D. M. Uspensky, of Professor A. P. Dobroslavin's laboratory, has proved (*Vratch*, Nos. 32 and 33, 1887, p. 613)—1, that the 'vegetable felt' contains as many as 70,000 living germs in each 1 gramme (of powder); 2, that, beside mould fungi, there are constantly present bacteria and micrococci of various species, some of which liquefy jelly and some do not; 3, that the substance does not destroy the microbes of typhoid fever, cholera, and anthrax, and even decidedly promotes their growth; 4, that, therefore, the 'vegetable felt' does not represent anything like an 'antiseptic' material.—*Rep.*]

1797. *Tiling on Excision of Horseman's Bone.*—At a recent meeting of the St. Petersburg German Medical Society (*Verein St. Petersburger Aerzte*) Professor Gustav F. Tiling, of the Grand Duchess Elena's Clinical Hospital, showed (*St. Petersburger med. Wochensch.*, No. 10, 1888, p. 90) a curious specimen of a 'horseman's bone' (*Reitknochen*) which he had shortly before removed from the thigh of Prince Z——, a Caucasian trooper. During the cavalry manœuvres of July 23, 1887, the patient, who had been a great rider all his life, when clearing a very wide ditch, suddenly felt an agonising pain in his left groin. The pain was so severe that he was compelled to drive home at once and go to bed, where he remained for eight days, his groin being greatly swollen and painful. He was then able to get up and walk about, but walking was associated with inguinal pain. Every attempt at riding proved extremely painful and well-nigh impossible. About the end of September he was examined by Dr. A. I. Schmitz, who found a 'horseman's bone' in his limb, and accordingly recommended an operation. When first seen (in November) by Dr. Tiling, the patient could move about but very slowly, with the support of a cane. When he lay on his back with his lower limbs closed, no-difference between his thighs could be detected. But on separating the thighs and on rolling the left one outwards there was at once noticed a very prominent, sharply-pointed end of a hard body, in about 6 or 7 centimètres downwards from the horizontal branch of the pubic bone, on the inner anterior aspect of the thigh. This ossified body could be slightly moved from side to side, but not in an antero-posterior direction. It was connected with the angle of the pubic bone by means of a firm and wide band. A 'horseman's bone' of the long adductor was diagnosed, which supposition proved correct on exposing the bone by a longitudinal incision. The bone lay just under the fascia, and was of the shape of a triangular pyramid, measuring 6 centimètres in height (length) and 4½ in breadth. The broadest side was directed forwards; it was even and smooth, while the smaller posterior sides were rough, and firmly adherent to the muscular fibres of the long adductor. The upper end of the pyramid was inserted just under the edge of the pubic bone by means of a fibrous ligament which could be divided by a knife. The base was also tendinous or fibrous. Neither a distinct cortical layer nor any medullary cavity were present. The spongy substance of the bone contained several foci of isolated connective tissue of the size of a pea. The operation apparently did not present any difficulties. Discussing the etiology of his interesting case, Dr. Tiling says that the bone might have originated in one of two ways: either a piece of the pubic periosteum might have been torn off and subsequently ossified, or a true myositis ossificans of some fibres of the adductor might have taken place, as a sequel to an extravasation. Connective-tissue insertion of the bone excised seems to be in favour of the latter mode of development. That is, a 'horseman's bone' in Dr. Tiling's patient developed in the same way in which the so-called 'soldier's bones' (*Exercierknochen*) originate, of the deltoid and great pectoral muscles, or 'athlete's bones' (*Turnknochen*), of the internal brachial and abdominal rectus muscles, or bony plates occurring after slight traumatisms in cases of *myositis ossificans multiplex*. During a discussion which followed Dr. Tiling's communication, Dr. A. I. Schmitz related (*ibid.*) his case of a girl, aged 7, in whom he had successfully excised an ossified clavicular insertion of the sterno-cleido-mastoid muscle. The bone ('an ossified connective-tissue cord') measured by 1 centimètre. In this case, he thinks, the bone resulted from a traumatic injury (laceration) to the periosteum of the clavicle. V. IDELSON, M.D.

1798. *Fink on Cancer of the Breast.*—Dr. Fink s recorded statistical details of interest, based on e observation of 194 cases of cancer of the breast, nder Professor Gussenbauer's care from 1878 to 886. After histories were collected throughout, own to September 1888; amputation of the breast as performed in 153 cases, mostly advanced when e patients were admitted into hospital. The axilla as always carefully cleared out. The mortality as 3·3 per cent.; 90 cases died from recurrence; 1·6 per cent. enjoyed two years' immunity from isease, 16 per cent. were free for three years. On an verage, the operation cases lived seven months onger than those left alone. Here it must be remembered, firstly, that the former were mostly advanced when the breast was removed; secondly, that the me underwent very complete clearing of the xilla. Of the whole 194 cases of cancer of the breast 128 were between forty and sixty years old, 38 between sixty and eighty, and 28 between twenty and forty, 72·1 per cent. were mothers, 38 patients having borne six or more children; 62·8 per cent. had suckled their offspring. Histories of injury or local irritation could only be authenticated in 12·7 per cent. The upper outer segment of the breast was the part involved in 104 out of 171 cases. Hereditary predisposition could only be traced with certainty in 8 out of the entire 194 cases. Metastases, generally in the lungs, pleura, or liver occurred, on an average, twenty-five months after the beginning of the disease in 53 cases where a clear early history could be obtained. ALBAN DORAN.

GENITO-URINARY SURGERY.

RECENT PAPERS.

1799. GUYON.—On the Receptivity of the Urinary Mucous Membrane to Infection by Microbes. (*Annales des Maladies des Organes Génito-Urinaires*, May 1889.)

1800. WATSON, DR. F. S.—On Suture of the Bladder after Suprapubic Cystotomy. (*Boston Med. and Surg. Jour.*, April 18, 1889.)

1801. FENWICK, HURRY.—On Fifteen Months' Experience of Electric Illumination of the Bladder. (*Brit. Med. Jour.*, May 4, 1889.)

1802. BUCKSTON BROWNE.—On Suprapubic Prostatectomy. (*Brit. Med. Jour.*, May 16.)

1803. ANDERSON.—On Suprapubic Cystotomy for Tumour of the Bladder. (*Brit. Med. Jour.*, May 18.)

1804. BARRS, DR.—On a Case of Double Hydronephrosis of Congenital Origin. (*Lancet*, May 18, 1889.)

1805. DICKINSON.—On the Kidney in Hereditary Albuminuria. (*Pathological Society of London*, May 7, 1887.)

1806. IMLACH.—On Four Cases of Nephrolithotomy. (*British Med. Jour.*, June 1, 1889.)

ART. 1799. *Guyon on the Receptivity of the Urinary Mucous Membrane to Infection by Microbes.*—Professor Guyon inquires under what condition microbes exert their influence upon the urinary tract, and particularly how retention of urine affects this. It is well known that in chronic distension of the bladder even with ammoniacal state of the urine there is rarely any extension of infection of the mucous surface beyond the bladder, and even in acute cystitis the same remark holds good; but Professor Guyon records some experiments on animals undertaken to learn the part played by retention in the extension and production of septic inflammation in the mucous membrane. He introduced into the bladder pure cultivations of pathogenic bacteria which are found in animals as well as man, and twenty-four hours afterwards it was not possible to find in the urine any of the infected microbes, nor was there any lesion of the mucous surface. To obtain even a slight degree of cystitis it was necessary to use 'massive' doses of the most virulent organisms, and even then their effect was not traceable beyond the bladder itself. After ligature of the penis animals died of rupture of the bladder or were killed. There was then found tension of the bladder with rich vascularity and ecchymosis of the mucous membrane, dilatation of the ureters, and congestion of the kidneys, but on careful examination and cultivation *no micro-organisms*. When pyogenic microbes had been injected at the same time as ligature of the penis there was found œdema of the mucous membrane after four or six hours, and the permanence and extent of the cystitis corresponded with the duration of the ligature of the penis. In two cases the microbes injected were found not only in the bladder but in the pelves of the kidneys. The conclusions arrived at from these experiments were that retention of urine favours infection of the urinary tract by rendering the inoculation of microbes effective—that the receptivity is proportionate to the duration and degree of the retention—and the lesions produced by retention either acute or chronic favour the action of pathogenic agents. Applying these observations to practical work, it is urged that infection generally occurs in the human subject from direct inoculation by instruments. Among patients suffering from diseases of the urinary tract the urethra does not give passage naturally to infective germs. The author induced retention experimentally in two rabbits by dividing the medulla, and the bladder was injected in one with pyogenic bacteria but not in the other case. When the animals were killed about forty-eight hours afterwards the bladders were found enormously distended, but that which had received the injection of microbes showed œdematous cystitis; the urinary apparatus of the other was aseptic.

1800. *Watson on Suture of the Bladder after Suprapubic Cystotomy.*—Dr. Watson looks upon bladder suture as advantageous, and concludes from experiments on dogs, that—1. Primary healing of the bladder wound occurred in every instance, even when there had been a total disregard of antiseptic measures. This occurs because the dog's bladder is covered by peritoneum, and dogs are not liable to peritonitis. 2. The function of the dog's bladder is not so readily disturbed as is that of man—extensive resections of the dog's bladder and attempts to excite cystitis not being followed generally by bladder disturbance of serious importance. 3. The ultimate results of healing did not materially differ with different forms of sutures used. 4. Silk in two instances caused fistulous tracts from the skin, leading to, but not into, the bladder. 5. The two sutures most easily and quickly applied were the Dieffenbach and that which Dr. H. W. Cushing has used in the intestine. The Dieffenbach involves more tissue than the other varieties, but he does not know that this is of practical disadvantage. Incidentally discussing two of the specimens, the first shows one of the disadvantages of penetrating the mucous membrane with the suture, in that stone formation will occur, as it has done in this instance, upon that portion of the suture lying within the bladder. The second is interesting as demonstrating how very smooth and perfect the union of mucous membrane wounds may be, as it is very difficult to discover the line of the incision. 6. The needle should be short, as the bladder wound lies deep and in a narrow space, making it difficult to work therein with a long needle. 7. Should silk or catgut be used? If we could count upon primary union of the wound as a rule, silk would be preferable; but as that is not the case, catgut is the better, for the reason that in case of failure of union a bit of the silk is likely to be floated upward into the prevesical space (one end perhaps still attached to the edge of the bladder wound), and thus give rise to urinary fistula, or, on the other hand, dropping downward into the bladder, give rise to stone formation, or prevent healing also in that way. Apart from these technical considerations, the practical results clinically are the more important to know. Should these bladder wounds always be sutured or not? And under what conditions should the suture be applied or not? To answer these questions he offers a summary of the results of bladder suture in about one hundred cases reviewed for the purpose:—1. In this series primary union occurred in less than one-half the number (about 35 per cent.). 2. When failure to so unite took place, serious consequences did not result in the majority of instances, and rarely if the outer wound had been left partially or wholly open. 3. The mortality of suprapubic cystotomies undertaken for similar conditions is somewhat higher in the cases in which suture has been employed than in those in which all the wounds were left open and freely drained. The closure of the outer wound was one of the chief factors in this higher mortality of the former class, owing to consequent urinary infiltration beneath the edges of the outer wound (phlegmon, peritonitis, and septic processes resulting). 4. The less the morbid changes in the bladder in any given case, the greater the chances of successful union with the suture; thickened bladder walls, irritable bladder, or a foul cystitis making failure probable, and enhancing the danger if it does not occur. 5. Silk and catgut record about an equal number of successes and failures. His personal experience is limited to one case, but it served to make clear to him another indication for not sewing up these wounds, which he emphasised in reporting the case two years ago, and which may be appropriately repeated here—namely, the bladder wound should never be sutured if hæmorrhage of any consequence is liable to occur within the bladder afterwards. Such hæmorrhage followed the removal of a papilloma of the bladder in the cases referred to. Shock, which was already marked, was, he thinks, materially increased by the incessant and violent tenesmus that was brought on by the bladder's efforts to expel its contents of blood-clot unavailingly, until the suture gave way after about eighteen hours, giving free exit to the bladder contents and entire relief to the patient, who made an excellent though tedious recovery. The great temptation to apply the suture arises of course from the much shorter and safer convalescence attending its success; and success, he thinks it may safely be affirmed, will take place in a larger proportion of instances than 50 per cent. if the procedure is not employed indiscriminately, but selection made according to the following rules, which he offers by way of conclusion:—1. Employ the suture when the pathological changes in the bladder are slight (as, for example, in a young person with a stone of recent formation), or where chronic cystitis has not induced marked vesical change. 2. Avoid the suture in cases in which hæmorrhage is to take place within the bladder subsequently to operation, in irritable or thickened bladders, or when a foul cystitis is present. 3. Whether the bladder wound be sutured or not, the outer wound should be left open for the greater part of its extent. 4. In applying the suture use catgut and a short needle, and that form of suture most easy of application, two such being the Dieffenbach and Dr. H. W. Cushing's intestinal suture.

1801. *Fenwick on Fifteen Months' Experience of Electric Illumination of the Bladder.*—At the Medical Society of London Mr. Fenwick read on

March 11 a very important practical paper on the application of the cystoscope in the diagnosis of vesical disease. He has so large an experience of the subject that his remarks are of special value. A novice may recognise a typical growth or calculus, but he may readily be deceived by the perplexing appearances which the mucous membrane is wont to assume under the varying conditions of relaxation, congestion, extravasation, and infiltration, and may be tempted to interfere operatively to his own and the patient's detriment. Vesical fallacies in electric endoscopy may be—(1) those encountered in the healthy bladder; (2) those met with in the diseased bladder. 1. In the healthy bladder. (*a*) *The Ureteral Cone.*—The first pitfall to be avoided is a slightly prolapsed ureter. The vesical orifice of the ureter usually appears as a pouting thick-lipped orifice, but even in perfect health it may be a red gelatinous cone, more or less obtruncated. It is then very like a small sessile tumour; in fact, in one case of hæmorrhagic cystitis he had some difficulty in dissuading the surgeon who had 'discovered' the prolapse from operating in order to remove it. The similarity is much increased by the magnifying power which the prism possesses. To recognise it, the cystoscopist notes that its position corresponds to the postero-external angle of the trigone; that the summit is slightly flattened, depressed, and occupied by a small orifice, whence tiny jets of glycerine-like fluid issue at varying intervals; and, moreover, that the apex not infrequently protrudes and recedes rhythmically. This prolapse will, he believes, be chiefly found in patients in whom the ureter is energetically contracting under a constant stimulus, such as that created by a renal stone, by calculous or tuberculous pyelitis, &c., the prolapse being in these cases analogous to the rectal protrusion due to polypi, piles, or worms.* Heaped-up mucous membrane at the ureteral orifice has a similar appearance. (*b*) *Rugæ.*—The healthy, lissom, inelastic mucous membrane, when folded in by the contracting muscle tunics, forms creases, plaits, and wrinkles, which are sometimes caught sight of in profile, and which then appear like rows of papillomata. By turning the prism so as to full-face them the deception is detected. When these rugæ are inflamed or swollen their appearance is still more puzzling. 2. The diseased bladder. (*a*) *Rugæ.*—Not infrequently, in hæmorrhagic cystitis, parallel rows of purple or blood-red rugæ are seen, which, if caught in profile, resemble multiple villous growths very markedly. This condition and fallacy was well illustrated in a patient of Dr. Dawson's. The right side of the bladder was covered with parallel upraised plicæ of a deep blood-red colour, whilst on the left side the mucous membrane could be seen to be yellow, smooth, and glistening. (*b*) *Polyhedral or Rectangular Quiltings of Chronic Cystitis.*—The mucous membrane is swollen and gelatinous in certain forms of chronic cystitis. It gets rucked up and appears quilted, the enclosed patches projecting inwards as globose or polypoid bodies. In several cases he has seen the surface irregularly upraised as if by the tips of many fingers. This latter condition usually occurs at the base. (*c*) *Phosphatic and Encrusted Growths* are sometimes exactly like stones, but a touch with the tip of the instrument settles the matter. (*d*) *Hæmorrhages.*—These are usually observed in hæmorrhagic cystitis and in the rare cases of purpura and syphilis. They form elongated, oval, or roundish elevations of a deep red gelatinous aspect, very similar to epitheliomata. The neighbourhood of the former is, however, usually printed with hæmorrhagic spots, streaks, and blotches. The remaining surface, moreover, is blurred and filamentous. (*e*) *Tuberculosis.*—Of all the pathological changes of the mucous membrane which need most study, and in which the eye must be carefully trained, the most important is that due to tuberculous or scrofulous disease. He believes that it will be in this disease that the greatest number of mistakes will be made, for in every grade of its severity and in every stage of its progression towards suppuration or absorption it offers appearances which counterfeit those diseases for which the examination will be most often undertaken. Heaped-up, cockscomb-like projections of swollen mucous membrane mimic the stunted papillary fibroma. The short and tag-like streamers of necrotic tissue resemble the necrotic villi or shreddy ulceration of neoplastic surfaces, whilst the large tabs of infiltrated mucous membrane receding from an ulcer or a stripped-off surface resemble polypi or subvilloid growths. *Electric Cystoscopy v. Digital Exploration for Diagnostic Purposes.*—Dr. Nitze, to whom we owe the method, contends that electric cystoscopy should supersede Sir Henry Thompson's operation of digital exploration. This Mr. Fenwick can fully endorse. He would submit that digital exploration for diagnosis in the greater number of obscure cases is quite needless, and that the electric light is, when used with judgment and experience, quite equal to the finger. To support these statements he gives a list of the first forty-three cases in which he used the light for diagnostic purposes. These forty-three cases will serve to compare with the list of forty-three published by Sir Henry Thompson. He has, of course, omitted from this list calculi, vesical growths, and other morbid conditions which have lately come under his care, and which have been easily diagnosed without the light. 'I have, moreover, excluded a very large number of cases of well-recognised bladder disease in which I have employed the light educationally in order to control my clinical observations and speculations by direct visual research. The comparison of the two methods and lists permits of the following statements being made:—1. Digital exploration is a cutting operation, needing confinement to bed. Electric cystoscopy can be performed routinely and rapidly in private or out-patient practice. 2. The former operation needs an anæsthetic. In the latter it is not absolutely necessary. In the greater number of cases I have neither used gaseous narcosis nor cocaine; I employ anæsthesia—(*a*) in females for delicacy, (*b*) in tuberculosis or similar cases where the prostatic urethra is extremely sensitive, (*c*) in order to make a leisurely prognosis of a discovered growth so as to determine the expediency of operating. 3. Digital exploration is not absolutely free from risk of hæmorrhage, and frequently either a troublesome fistula or a hyper-sensitive scar is left in the urethra. Cystoscopy is, if it be gentle and purposive, as free from risk as routine catheterism or sounding. 4. In most cases the educated eye is to be preferred to, and relied upon rather than, the finger. I am well aware that Sir Henry

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[*] If the prolapse exceeds these limits it may advance into the vesical cavity so far as to form rounded tumours of varying sizes, or in female children it may even protrude through the vulva, and tempt the surgeon to ligate it, with lethal effect, under the belief that it is a vesical growth.

Thompson trusts more to his great tactile delicacy; but, on placing the diagnoses of these two lists side by side, we shall see that the comparison is in favour of sight.

Sir Henry Thompson's List.	Cases.
Nothing found	14
Calculi	2
A scale of calculous matter	4
Tumours	20
Prostatic	2
Subvilloid condition	1
	43

Author's List.	Cases.
Nothing abnormal seen	2
Calculi	2
Renal hæmaturia	6
Tubercular cystitis	9
Hæmorrhagic cystitis	2
Tumours	15
Chronic cystitis	7
	43

5. The cystoscope affords us not infrequently a sound prognosis, and intimates when to interfere and when to leave alone; if it indicates operative interference, it also points to the path (suprapubic or perineal) best suited for access to the growth, and for its complete eradication. 6. It must be readily admitted that digital exploration allows of the bladder being subsequently drained; but the rest thus afforded is not always necessary, nor is it always productive of benefit. The conclusions derived from the consideration of the cases relate to—1. *The Relative Frequency of Benign and Malignant Growths.*—Sir H. Thompson has said that "villous growth (papilloma) is, in fact, of all varieties that which most commonly affects the bladder." This, I would submit, is not supported by the statistics of the removal of vesical tumours, which show a very large percentage of recurrences; nor is it warranted by the number of "cures" effected. Thus, out of twenty-nine cases, Sir Henry Thompson records five complete cures. Again, Guyon has reported twenty-two cases of vesical growths upon which he has operated, and only three of these were benign. My own list for this last year comprises twenty cases of vesical growths, and only two of these were benign. Moreover, in preparation of the Jacksonian Prize Essay I examined the various museums of Europe, and found 150 to 200 cases of carcinomatous vesical growths without difficulty, but only about fifty specimens of undoubted papillomatous growth. 2. *The Onset Symptom.*—Professor Gross, in attempting a differential diagnosis between malignant and benign growths, asserted that if the hæmaturia preceded, with long intervals of rest, the irritability and pain, the tumour was probably of the benign type; and, on the contrary, if irritability and pain appeared first, the growth was usually malignant. This statement, which has been freely recopied, is, I believe, inaccurate and misleading. Most of the fifteen cases I have quoted and examined comparatively early, say within two years of onset, have had painless hæmaturia as an onset symptom; and from these and other cases I am led to believe that the onset of hæmaturia is determined rather by the softness or delicacy of the growth, and the degree of traumatism to which it chances to be liable from its position in the bladder, than by its malignant or benign character. Moreover, the pain and irritability depend more upon the provocative power of the growth to excite reflex action than upon its nature. Thus a firm benign growth, situated nearer the orifice, or so pedunculated as to readily engage the sensitive neck, will excite pain and irritability at an earlier period; or, again, any growth, by inducing localised cystitis, will evoke similar symptoms. I cannot but believe that this mistake has probably arisen from comparing symptoms due to a hard infiltrating growth which irritates and stimulates the muscular wall long before it bleeds with those induced by typical villous papillomata. 3. *Site.*—Vesical carcinomata originate usually on the posterior wall, usually just behind the ureteral orifices or the interureteral bar, and grow towards the best blood-supply.'

1802. *Buckston Browne on Suprapubic Cystotomy.*—At the Clinical Society of London, May 10, 1889, Mr. Buckston Browne drew attention to the fact that all intra-vesical prostatic projections were either egg-like, with the vesical urethral orifice at the apex of the egg, or were modifications of this ovoid projection by reason of some portion of the hypertrophied urethral circumference being wanting. Thus, if the circumference superiorly and laterally were wanting, the result was the so-called middle lobe enlargement, which acted not only as a mechanical obstruction, but, when large, as a mechanical irritant, causing intense and constant desire to pass water, and adding terribly to the trials of an elderly man already obliged to pass all his urine by catheter. He condemned all operations for the removal of prostatic outgrowth, practised through the natural passages or through the perineum. He showed how the improvements in suprapubic cystotomy had prepared the way for Mr. McGill, of Leeds, who was the first to remove suprapubically portions of the prostate in order to restore to patients practising catheterism the power of normal micturition, and whose practice had been followed successfully by Mr. Mayo Robson. Mr. Buckston Browne then pointed out that, in many cases of 'advanced prostatic disease,' the sufferings of patients were not due so much to cystitis as to an intensely irritating prostatic intra-vesical growth, and the case he read was to illustrate the immense relief which followed the suprapubic removal of such tumours. He first saw the Rev. R. J. in 1885. He was then aged 83, and was suffering from prostatic retention of urine. There had been much difficulty in introducing the catheter. This difficulty was overcome. The prostate was felt by the rectum to be only moderately enlarged. During 1885-88 the patient was seen sometimes on account of vesical spasm and irritation, and was sounded three times for stone, and none found. He was an active man during this period, and passed his catheter every three, four, and six hours. On March 7, 1889, the patient was seen in consultation with Dr. Andrew Miller, his regular attendant. He was 87 years old, and was suffering from intense vesical irritation. The catheter was imperatively called for every hour, and his screams from vesical spasm were heartrending in spite of the free administration of morphine. At 9 P.M. ether was administered, and the bladder opened suprapubically. On entering the bladder the cause of the patient's sufferings was at once apparent; not a particle of calculus was found, but growing from below and from the right side of the vesical urethral orifice was an enormous prostatic growth. It was removed piecemeal by finger and forceps, the only difficulty being, at first, in getting through the prostatic capsule. When once that was opened, the lobules of the growth shelled out easily, and were removed by torsion, no cutting or tearing being employed. The whole, when removed, weighed nearly four ounces. When all was cleared away, the urethral orifice was level with the adjoining vesical surface, with its upper and left portions intact. There was hardly any bleeding, and the operation was followed by very little constitutional disturbance, and by complete vesical relief. On the sixteenth day the patient sat up. He was fitted with a suprapubic plate and tube designed by the author, which enabled him to dress and walk about, and were so comfortable that at present it was thought not well to allow the suprapubic wound to heal. The case was brought forward as of interest because—(1) the amount of prostatic tissue removed was believed to be the largest on record; (2) the great age of the patient; (3) the severity of his sufferings; and (4) the immense relief afforded by a comparatively recent surgical innovation. The President (Mr. Heath) recalled a paper read at that Society by Mr. Mayo Robson, of Leeds. He said he had only performed the operation once, and that case was peculiar in the sense that it turned out to be carcinomatous. In that case he had followed the original plan of using scissors to cut away the growth, and he had been surprised at the small amount of blood which was lost.

1803. *Anderson on Suprapubic Cystotomy for Tumour of Bladder.*—Mr. Wm. Anderson furnished the sequel to a report read before the Clinical Society in May 1885. The patient, a man, aged 53, was operated upon in August 1884 for villous tumour of the bladder, the symptoms of which had existed for twelve years. The growth, which was removed by the perineal route, was a large fibro-papilloma, occupying the whole of the internal trigone and a portion of the walls beyond. A good recovery followed, and the man remained well and free from vesical trouble for nearly four years, at the end of which time evidence of recurrence appeared, and a small sessile papilloma was detected near the internal meatus by cystoscopic examination. A second operation was performed in July 1888 by the suprapubic method; and, in addition to the papilloma exposed by the cystoscope, an infiltrating nodule of malignant character was found on the right side of the base of the prostate. It was also seen that the site of the original neoplasm was free from disease. Both tumours were removed, and the patient made a rapid recovery from the operation, the wound closing on the seventeenth day, and the bladder apparently discharging its functions normally. Two months afterwards hæmaturia again set in, and, later, a carcinomatous infiltration extended from the bladder along the track of the cicatrix left by the suprapubic wound; there was, however, neither suffering nor functional disturbance, and the patient died from progressive asthenia seven months after the second operation. The case was satisfactory from the surgical point of view, because the result of the first operation was quite successful, while the second operation gave complete relief to the distressing symptoms, although it could not extirpate the disease. A comparison of the two methods of operation was decidedly in favour of the suprapubic plan, in respect both to facility of performance and quickness of recovery. Pathologically, the case illustrated the tendency to retrogression of type often seen in new growths, either in the course of their development or on the occasion of their recurrence after operation.—Dr. Longhurst asked to what extent the bladder had recovered its contractility, and also as to whether any urine was passed by the urethra.—Mr. R. W. Parker mentioned that he had removed a tumour the size of a walnut from the bladder of a female, aged 21, through the dilated urethra, aided by the electric light introduced through a suprapubic opening. It was a myoma, and, although the operation had been performed two years ago, there had been no recurrence.—Mr. Croft said he had tried in vain to persuade three different patients to submit to the operation, but none of them had had the courage to consent. The difficulty was to induce patients to allow any such operation.—Mr. Browne, in reply, said that the patient could not pass urine through the natural passage. He observed that in most of the Leeds cases no idea was given of the size of the tumours removed. The point of interest in prostatectomy was as to the chance of the patient recovering his powers of natural micturition.

1804. *Barrs on a Case of Double Hydronephrosis of Congenital Origin.*—Dr. Barrs contributes a paper upon a peculiar case of double hydronephrosis in a man, aged 31, who came under notice with symptoms indicating an attack of acute Bright's disease. He had suffered from attacks of pain and vomiting three years ago, but until nine weeks before admission he remained well. Since that time he had been vomiting constantly, with abdominal pains. There was some enlargement of the abdomen, and a tumour was detected and aspirated, evacuating eighteen ounces of venous fluid; but he became delirious, and died comatose two days after. At the *post mortem* it was found that both kidneys were mere sacs, and the only explanation of the hydronephrosis was in the congenital peculiarity of the ureters, which were small, and sprang from the cysts in such a manner as to make their connection obscure. Dr. Barrs cannot find any explanation of the cause of the disease but the congenital defect in the method of insertion of the ureters into the renal pelvis. There was no obstruction in the ureteral orifices, in the bladder, or in the urethra, and he would therefore class it with two described by Sir Wm. Roberts in his *Urinary and Renal Diseases*, as illustrating how a congenital malformation, which at first offered only a slight obstruction to the course of urine, comes step by step to constitute a greater obstruction. He is inclined to think that the appearance of symptoms generally associated with Bright's disease—albuminuria, œdema, hæmaturia, and coma—ought to suggest the bilateral nature of the lesion, and so modify the surgeon's views about operative interference. The vomiting he thinks undoubtedly due to the mechanical stretching of the duodenum upon the surface of the tumour.—[This case is important as a contrast and parallel with some recorded cases of gastric crises in hydronephrosis. Mr. Morris gives an interesting account of such in intermittent hydronephrosis in his *Surgical Diseases of the Kidney*, but here and in other intermittent cases pain has been even more marked than the vomiting, and there was distinct evidence of copious evacuation of the cyst by the ureter before the relief of the symptoms. In this case the hydronephrosis was more gradual and constant, but it is interesting to note that some relief was given to the constant vomiting by aspiration of the cyst. Pathologically, it is important to notice that here the duodenum was tightly stretched across the tumour, and therefore the important nervous structures in the neighbourhood must have been implicated. In other cases the character of the symptoms has suggested the cases being tabetic, but in these the progress has not been so insidious.—*Rep.*]

1805. *Dickinson on the Kidney in Hereditary Albuminuria.*—Dr. Dickinson brought before the

Pathological Society, of which he is President, a kidney belonging to a member of a family in which albuminuria had been hereditary, certainly for four generations, and possibly for more. He had referred to this remarkable piece of family history in his book on albuminuria, but was now able to give it more fully, and with the additional information derived from a *post-mortem* examination. The first generation consisted of a brother and four sisters. The brother died suddenly, after a long wasting 'of kidney disease in some shape,' at the age of 34. Of the four sisters, two died at the respective ages of 49 and 48, each having had albuminuria for many years. The brother left six children—two sons and four daughters. Of the six, four became the subjects of albuminuria, the second son dying with it at the age of 26, having had it since the age of 12. The eldest daughter died of it at the age of 39, having had it since 16; the second daughter, still alive, has it; the third daughter died of albuminuria complicated with diabetes. All the sisters had left children, two of the four sisters transmitting albuminuria. The eldest sister left six children, presently to be mentioned. The third left five, one of whom had albuminuria. These constituted the third generation. Of the six children of the eldest sister, five became subject to it, and only the second son escaped; the third son died with it, and was the subject of further particulars. The disorder presented itself in the fourth generation in the only child of the eldest sister, which was born with albuminuria. To these facts were added others, which showed the existence of the disease in a collateral line, as was shown in a table placed before the Society. It was stated that the portraits of this family, which have been preserved since the time of Edward IV., showed a peculiar pallor, whether from time or disease, which resembled that which had generally characterised the living and late members. Particulars relating to the character of the albuminuria in many of the persons referred to were briefly related, showing the general presence of casts and other evidences of renal disease. The kidneys of the only fatal instance in which they were fully examined were described in detail. They presented the characters of the granular contracted kidney, with general fibrous hypertrophy, universal prevalence of a finely nucleated interstitial tissue, atrophy of many of the Malpighian bodies, with atrophy of many tubes and dilatation of others, the latter being conspicuously plugged with large casts. An exceptional appearance was the existence sometimes within the tubes, sometimes in less evident relation to them, of numbers of minute calcareous concretions, which were possibly formed within the tubes, as a result of their obstruction. It was discussed whether any calculous proclivity in the family was antecedent to the renal state, and this possibility was negatived by a review of the general clinical antecedents. The conclusion remained that some especial hereditary influence was directed upon the kidneys primarily. Dr. Dickinson had formerly referred to this family history as one of hereditary granular kidney. What before was only a surmise was now a pathological fact, and, as such, possibly worthy of the notice of the Society. Dr. Pye-Smith referred to the importance of the case which the President had brought before the Society. He asked whether Dr. Dickinson could suggest the origin of the tendency, as the usual factors in the production of Bright's disease, such as gout, had either been excluded by Dr. Dickinson or were else impossible to trace. Dr. Pye-Smith was glad to see that Dr. Dickinson had spoken of Bright's disease, and not of Bright's diseases, as he thought that, owing to Virchow's influence, this disease had been of late years unduly subdivided. He commented on the early incidence of the disease in some members of this family, three having shown evidences of it within the first year of life. This pointed to the fact that there was an albuminuric diathesis, apart from gout or lead, where the kidneys would fail under any unwonted strain, just as is known to be the case with the nervous, alimentary, and other systems of the body.

1806. *Imlach on Four Cases of Nephrolithotomy.*—The following abstract gives the four cases which Dr. Imlach reports:—Case 1.—J. M., aged 26, married, two children, admitted into hospital March 26, 1885. For the past four years she had suffered occasionally from gravel, but not, so far as she knew, from hæmaturia. Three weeks after the birth of her second child (July 1883) she felt a hard and painful swelling in the left side of the abdomen, which was lanced, one month later, by her medical attendant in St. Helen's. Ten ounces of pus escaped, and the incision soon healed, but ten days later an abscess pointed two inches in front of the cicatrix, and it was opened and drained. On admission, pus flowed freely from both orifices. Her general health was much reduced by frequent vomiting and uncontrollable diarrhœa, and her brow, temples, and palate were bronzed, as in Addison's disease. On April 7, after administration of chloroform, the structures between two long sinuses were severed, and a second incision at right angles to the first was made along the outer border of the erector spinæ. The sinuses entered the renal pelvis, from which, with the aid of a metal scoop, fragments of a calculus weighing 106 grains, and branching into the calices, were gradually removed. Several deep burrowing sinuses were opened, and a glass drainage-tube inserted. During the course of the night she vomited blood, and also passed blood by the rectum, but otherwise her recovery was uneventful, and the wound had quite healed when she left hospital on May 6. The calculous fragments appeared to be phosphatic, but, on section of the largest one, alternate layers of uric acid and phosphates were shown. Previous to operation there was a daily flow (mean of three days) of forty ounces of urine, specific gravity 1026; on boiling with nitric acid there was one-half volume of albumen, and pus cells were seen under the microscope. Ten days after operation the albumen entirely disappeared from the urine, the daily quantity of which (mean of five days, April 22-26) was thirty-one ounces, specific gravity 1022. I recently heard from this patient that she was in good health. There had been an occasional urinous discharge from a small fistulous opening until two years ago. Case 2.—Mrs. E., a tailor's wife, aged 31, with one child, appeared in August 1886, with a perceptible swelling, dull to percussion, in the right side of the abdomen, which she had felt for five years. There was no distinct history either of hæmaturia or of urinary gravel. The menstrual period was often delayed for three or four months, and her health was indifferent. From the position of the tumour and the fluctuation of its contents, a diagnosis of suppurative pyelitis was made. On Sept. 22, the kidney was reached by a lumbar oblique incision, and the bulging cortical border opened. After about 12 ounces of pus had been evacuated, five uric calculi, together weighing 550 grains, were removed, the cavity was copiously washed with warm water, and a drainage-tube inserted. The wound rapidly healed, the patient was up and out within three weeks of the operation, and no fistula remains. Case 3.—Mrs. E. M., aged 48, who had given birth to eight children, came to me on Nov. 3, 1886, complaining of lumbar pains, which had been for years ascribed to the menopause, although this condition had been reached three years previously without any cessation of the painful symptoms. As there was always considerable pain on pressure, and doubtful swelling in the region of the left kidney, with a small quantity of pus constantly in the urine, on Oct. 19, 1887, I cut down upon that organ, after an anæsthetic had been exhibited by Dr. Dawson, and opened an abscess containing nearly an ounce of pus. Three days later, dissatisfied with the condition, I extended the incision, and was so fortunate as to remove three small uric acid calculi, the largest one from the left renal pelvis, and the two smaller from the entrance to the ureter, which they blocked. In less than a month she went home, but for several months there was some urinous discharge from a small fistula. Case 4.—Mrs. C. H., aged 27; five children, the youngest born July 1888. Ten years ago, after a fall from a chair, which hurt her right side, she had hæmaturia for a fortnight. Five years later a tumour, the size of an egg, appeared in her right side, which slowly grew until, on Jan. 3, 1889, when I first saw her, it extended an inch beyond the navel, and was a prominent, fluctuant, abdominal tumour. As Dr. Stoney, of Millom, Cumberland, who had referred her to me, agreed in my diagnosis of suppurative right kidney, with possible calculus, on Jan. 5, with his kind assistance, I incised the tumour at its most prominent part, an inch and a half to the right of the navel, and, without injury to the peritoneum, evacuated thirty ounces of fœtid pus; and I then scooped out a soft triangular calculus, to which the renal calices were intimately adherent. There was little attendant hæmorrhage after the cavity had been well washed with hot-water, but a glass drainage-tube was inserted for some days. In three weeks she returned home, and though there is still (March 10) a slight purulent discharge, it appears to be superficial, for no fistula can be detected. The calculus weighs 2½ drachms. All four cases are illustrative of suppurative pyelitis, with calculus as cause or consequence. In Case 3, the renal pelvis appears to have ruptured and the pus to have partially escaped among the paranephric cellular tissue. In none of them was 'renal colic' very marked; in one only was there undoubted hæmaturia, but in all some pus in the urine. Absence of shock after operation may probably be ascribed to the copious flushing with warm water.

W. W. WAGSTAFFE.

ON THE INFLUENCE OF SEA-SICKNESS ON THE GROWTH OF THE NAILS.—In the *Illustrated Medical News*, May 1889, p. 128, Mr. Stephen Paget contributes a wood-cut showing how slight and transient may be the disturbance of the general health that can arrest the growth of the nails. The case was that of a gentleman who went to America and back, and was badly sea-sick during both voyages, and it was found that the furrows in the nails corresponded exactly, in point of time, to the two attacks of sea-sickness.

THERAPEUTICS.

RECENT PAPERS.

1807. Poulet, Dr.—On the Treatment of Purpura Hæmorrhagica by Nitrate of Silver. (*Bull. Gén. de Thérap.*, May 30, 1889.)

1808. Witherle, Dr.—On Sulphide of Calcium in Phthisis. (*La Clinique*, May 30, 1889.)

1809. Bonamy, Dr.—On the Treatment of Diphtheria. (*Bull. Gén. de Thérap.*, May 30, 1889.)

1810. Egasse, Dr.—On Some New Vegetable Diuretics. (*Bull. Gén. de Thérap.*, May 1889.)

1811. Beaumetz and Bardet, MM.—On Exalgine. (*Rev. de Thérap.*, May 15, 1889.)

1812. Clément, Dr.—On Antipyrine. (*Lyon Méd.*, May 5, 1889.)

1813. Cazeneuve, Dr.—On some New Experiments with Antipyrine. (*Ibid.*)

1814. Antiseptic Mixture for Soft and Waxy Concretions in the Ear. (*La Clinique*, May 23, 1889.)

1815. Descroizilles and Duchenne.—Two Formulæ for Tænicides for Children.

1816. Styptic Collodion.

1817. Guiao, Rodrigues A.—Resorcin and its Uses. (*Il Progresso Medico*, March 15 and April 1, 1889.)

1818. Bütchinskaia, Dr. L. G.—Some Observations on the Effects of Sulphonal in the Insane. (*Vratch*, No. 17, 1889, p. 406.)

1819. Kazatchkoff, Dr. S.—On Beetroot as an Aperient in the Russian Popular Medicine. (*Meditzina*, No. 6, 1889, p. 10.)

1820. Jamison.—Bromide of Potassium in Ovarian Acne. (*Practitioner*, May 1889, p. 346.)

1821. Maddox.—A Simple Inhaler. (*Practitioner*, May 1889, p. 349.)

1822. Tappeiner, H.—On the Action of Sodium Fluoride (*Zur Kenntniss der Wirkungs des Fluornatriums*). (*Arch. f. Exp. Path. u. Pharm.*, Band 25, S. 203.)

1823. Schulz.—On the Reaction of Sodium Fluoride (*Untersuchungen über die Wirkung des Fluornatriums und der Flussäure*). (*Arch. f. Exp. Path. u. Pharm.*, Band 25, S. 326.)

ART. 1807. *Poulet on the Treatment of Purpura Hæmorrhagica by Nitrate of Silver.*—The author relates two characteristic and severe cases of purpura hæmorrhagica which promptly recovered when nitrate of silver was given internally. The first was that of a boy, 12 years of age, with a family history of tuberculosis and albuminuria, who, eight days previously, had been attacked by a petechial eruption, culminating in profuse epistaxis, which rapidly reduced him to an exsanguineous condition. He ordered perchloride of iron and the acid infusion of roses, and as this did not check the hæmorrhagic tendency he followed it up on the following day by plugging the nostrils and giving subcutaneous injections of ergotine. The bleeding, however, continued as before, and the condition of the patient became critical. He then resorted to nitrate of silver, in doses of one-fifth of a grain, twice a day, incorporated with bread-crumb and given after food. The next day a manifest improvement had taken place, and in the course of three or four days the drug could be discontinued. The lad gradually recovered, but the loss of blood had been so abundant that it was years before he ceased to be delicate and anæmic. The second case was that of a young woman of 20. Eight days after her last menstrual period purpuric spots made their appearance, with frequent attacks of bleeding from the nose, stomach, and bowels. She was fairly well nourished, and lived in the open country. Her previous health had been good, but for some weeks past she had experienced a feeling of lassitude with loss of appetite. The eruption was most marked at first on the lower extremities, but soon became general. Various anti-hæmorrhagic remedies were tried, but without any marked effect on the bleeding. Slight albuminuria. Legs a little puffy. Under these circumstances he ordered one-eighth of a grain of nitrate of silver in a pill three times a day. The effect was so marked that within four days sight and hearing were restored, and the purpural patches began to fade. The hæmorrhages ceased after the first day of the exhibition of the nitrate. Twelve pills in all were taken, and they sufficed to effect a cure.

1808. *Witherle on Sulphide of Calcium in Phthisis.*—Dr. Witherle claims to have obtained good results in the treatment of phthisical patients by the internal administration of sulphide of calcium. He commences by giving a pill containing ½ grain of the sulphide every two hours, and he gradually lessens the intervals between the doses until eructations or other symptom of gastric irritation show that the limit has been reached. In most cases patients were able to take two pills every hour, and their general condition in every instance appeared to improve. This is, in reality, an indirect method of introducing sulphuretted hydrogen into the blood, and the principle is the same as that underlying Bergeon's treatment.

1809. *Bonamy on the Treatment of Diphtheria.*—The author expresses a doubt as to the innocuousness of the carbolic spray treatment, and states that for years he has exclusively employed sprays medicated with the essential oil of Eucalyptus globulus. The first series comprised 15 cases, of which 8 were tracheotomised and three died. His colleague, Dr. Barthélemy, also used the eucalyptus spray, mixed with a little turpentine, and had six deaths out of 17 cases. Dr. Lacambre, of Nantes, who has also used the eucalyptus spray in a large number of cases, speaks very highly of its value. He reports upwards of 80 cases of diphtheria and croup, and nearly all the cases of diphtheria pure and simple recovered, together with a fair proportion of the cases of croup. He keeps the temperature of the room at 18° or 20° C., and saturates the air with moist vapours of eucalyptus, and he expresses the greatest satisfaction at the results obtained by this method of treatment.

1810. *Egasse on Some New Vegetable Diuretics.*—Three plants of recent introduction have been found to possess valuable diuretic properties—pichi or piché, bean flowers, and chimaphila umbellata. Piché (Fabiana imbricata) is a native of South America and the parts used are the stems, twigs, and flowering tops. Treated by ether the plant yields a large proportion of a green resin. The aqueous decoction is of a brown colour and free from turbidity. The plant has long been utilised in Chili in the treatment of inflammatory conditions of the urinary tract both in man and animals. In England and America the plant is reported to have given excellent results in cases of cystitis, gravel, and renal congestion. It is usually presented in the form of a decoction, made by boiling an ounce of the cacumina in two pints of water for half an hour. Three or four pints of this decoction should be given during the twenty-four hours. In the States, a fluid extract of the plant is used. The common bean (Faba vulgaris) is the plant universally cultivated for alimentary purposes. An infusion of the flowering tops (a 'pinch,' in a cupful of boiling water) has a marked sedative effect in cases of nephritic colic and dysuria. It has been used for centuries in Sicily and Calabria to combat the uric acid diathesis and calm the pain of nephritic colic. The natives prepare a decoction with one-third of an ounce of the dried flowers in two pints of water, reduced by ebullition to a pint, which is about the dose for 24 hours, and is given on the supervention of an attack. It has recently been tried on a large scale, and competent observers are inclined to think highly of its powers. It acts as an indirect diuretic and anti-spasmodic, like the meadow-sweet or lime-tree tops, but more energetically. The chimaphila umbellata or winter green, grows on the mountains of North America, Russia, Siberia, &c. It is an evergreen with pale yellow or rose-coloured flowers, and is quite distinct from the plant usually known by the name of wintergreen (*Gaultheria procumbens*). It is employed in the same class of cases as the preceding, but its chemistry and pharmacology are still very incomplete.

1811. *Beaumetz and Bardet on Exalgine.*—Exalgine is a derivative of acetanilide (antifebrin), and occurs in fine needles or in large flat plates. It is slightly soluble in cold water, more so in hot, and is readily dissolved in water mixed with a small proportion of alcohol. In animals, it acts promptly on the cerebro-spinal axis, and rapidly kills rabbits in doses of 1 to 2,500 of the animal's weight. In smaller doses, sensibility to pain becomes blunted and disappears, although tactile sensibility remains. Its physiological effects strikingly resemble those of antipyrine, but exalgine acts more markedly on sensibility and less on the thermagenetic centres. Its therapeutical dose is 5 to 8 grains in one dose, or 8 to 10 grains administered in two doses with an interval of twelve hours. The analgetic action is very pronounced, and so far, no cutaneous eruptions, cyanosis, nor gastric irritation have been noted. It is eliminated in the urine, and, like other bodies belonging to the same group, it lessens the secretion in diabetic polyuria, and reduces the amount of sugar.

1812. *Clément on Antipyrine.*—The author insists upon the efficacity and innocuousness of antipyrine, which he claims to have administered even to young children without any untoward symptoms. He asserts that the collapse which has in some instances followed the use of the drug is invariably due to its improper or inappropriate administration. He has often seen the temperature fall to 36°, and even 35°·8 C., without the slightest tendency to collapse. He admits that in some instances antipyrine causes profuse perspiration, but says that this is only to be apprehended in phthisical patients. Eruptions also are by no means uncommon, but they are not as serious or as troublesome as some writers have made them appear. In most cases the eruption has seemed to be due to an idiosyncrasy on the part of the patient. He points out that the number of cases in which grave symptoms have supervened after the administration of antipyrine is exceedingly small, and he suggests that their occurrence may be a mere coincidence. He then criticises the cases in which eclampsia and death is alleged to have resulted from its use, pointing out that the doses given were very small, and that the principal symptom was anuria, which might have been, and very likely was, due to collateral circumstances. He believes that it is never wise to exceed 60 or 70 grains.

1813. *Cazeneuve on Some New Experiments with Antipyrine.*—From a series of experiments with antipyrine, carried out on dogs in a state of inanition, Dr. Cazeneuve concludes that, in large doses, antipyrine (1) increases the specific gravity of the urine, (2) does not alter the amount of urine excreted, (3) increases the excretion of urea, (4) does not increase the proportion of nitrogen in the urine, and (5) that sulpho-derivatives are increased, especially in the matter of sulphates.

1814. *Antiseptic Mixture for Soft and Waxy Concretions in the Ear.*—It is suggested, with the view of facilitating the removal of accumulations of wax in the external auditory meatus, that the following antiseptic preparation should be made use of:—℞ Acid. boric., gr. 55; glycerini puriss., ℥jss.; aqua dest., ℥jss. This should be warmed and instilled into the ear, leaving it there for a quarter of an hour, and repeating the process for a day or two. The result is to soften the plugs and make their removal comparatively easy by means of the syringe.

1815. *Descroizilles and Duchenne on Two Formulæ for Tænicides for Children.*—℞ Ext. felicis liq., ʒss. to ʒiij.; ess. anisi, ♏x.; aqua menth. pip., ℥ss.; aqua camomelis, ℥j.; syr. simpl., ʒvj.; syr. aurant. cort., ʒvj. ℞ Ext. felicis liq., ʒj.; hyd. subchlor., gr. vij.; sacchari, ʒij.; gelatine, q. s. to make a jelly of a proper consistency.

1816. *Styptic Collodion.*—℞ Carbolic acid, 10 parts; tannic acid, benzoic acid, āā 5 parts; collodion, 100 parts. To be shaken together until a perfect solution is effected. ALFRED S. GUBB.

1817. *Guiao on Resorcin and its Uses.*—In this paper, an inaugural thesis for the doctorate, Dr. Rodrigues Guiao describes very fully the chemistry, physiological effects, and therapeutics of resorcin. In intermittent fevers it is very useful, but in the graver forms not so good as quinine. It makes a capital gargle in mercurial stomatitis. It is not less useful in thrush, diarrhœa, enteritis. In whooping-cough it has been much used with the best results. In diseases of the ears, eyes, and nose he confirms the good results obtained by other observers. Among diseases of the skin it is very efficacious in eczema, erysipelas, pityriaris versicolor and circinnata, sycosis, favus, &c. In balano-postitis, tænia tarsi, blepharitis, all very common in Brazil, resorcin gave excellent results. Also in ulcerative syphilitic rhinitis, with or without ozæna, acne vulgaris, and superficial lymphangitis, frequent in Rio de Janeiro from elephantiasis. In acute articular rheumatism it seems as good as salicylate of soda. In atonic ulcers, syphilitic ulcerations, and uterine and vaginal affections it is very beneficial. Lastly, resorcin will supplant phenol in antiseptic surgery; it is equally antiseptic and more harmless, and has no unpleasant smell. G. D'ARCY ADAMS, M.D.

1818. *Bütchinskaia on Sulphonal as a Hypnotic in Insanity.*—At a recent meeting of the St. Petersburg Society of Psychiatrists, Dr. L. G. Bütchinskaia, a lady doctor of St. Petersburg, communicated (*Vratch*, No. 17, 1889, p. 406) the results of her observations on sulphonal, carried out on twenty-two insane women, inmates of St. Nicholas's Asylum. The drug (Bayer's and Leonardi's preparations) was administered either at bedtime, in a single dose, varying from 1 to 2 scruples, or in ten-grain doses thrice a day. Out of 148 cases of the former category, in 141 the administration was followed in from one to two hours by sleep lasting from five to eleven hours, in the remaining seven cases the remedy failed to act. Some sedative effects were observed only when sulphonal was given in repeated doses. Of accessory phenomena, there were noticed—(*a*) in many cases (especially after 2-scruple doses) increase in frequency and strength of the pulse; (*b*) less frequently, quickening of the breathing; (*c*) in three cases a slight rise of the temperature; (*d*) fairly often, slight nausea, vomiting, gastric pain, diarrhœa; (*e*) in a majority of the cases a slight decrease in the specific gravity of the urine; (*f*) an unsteady, reeling gait, occasional giddiness, headache, sometimes mental excitement. The nervous symptoms are thought to be caused by cerebral congestion, induced by the remedy. On the whole, Dr. Bütchinskaia is inclined, seemingly, to regard the new hypnotic in a favourable light. However, she recommends a certain caution in its use, more especially in such cases where a stimulating action on the cerebral circulations might prove injurious. [During a discussion, Professor V. M. Bekhtereff, of Kazan, pointed out that, according to his experience, sulphonal shared with other hypnotics the property of being inconstant in its action; while Professor J. P. Mierzejewski, of St. Petersburg, emphasised the necessity to be exceedingly cautious in the administration of sulphonal, or any hypnotics, in cases of organic cerebral disease.—*Rep.*]

1819. *Kazatchkoff on Beetroot in Habitual Constipation and Hæmorrhoids.*—In the St. Petersburg new periodical *Meditzina*, No. 6, 1889, p. 10, Dr. S. Kazatchkoff draws attention to the fact that a strong infusion or decoction of the common beetroot (*Beta vulgaris*; Russ., *bürakī* or *svīokla*) represents an excellent mild aperient, very much in favour with the South Russian peasantry, who resort to it especially in cases of atonic habitual constipations and hæmorrhoids. It is taken in doses of from half to one tumblerful at bedtime or early in the morning about an hour before breakfast. The remedy does not cause any abdominal pain, griping, or rumbling, nor does it create any tendency to consecutive constipation. On the contrary, any disposition in that direction is decidedly removed by a daily use of the decoction for a certain period. It is stated, however, that the patient's bowels get habituated to the beetroot in a week, so that, by the end of that time, the dose of the decoction should be increased, or a couple of apples a day be added. According to the author's experience, many constipated patients prefer the beetroot 'juice' to castor-oil, rhubarb, podophyllin, magnesia, milk-sugar, milk, mineral waters, and similar ordinary means, used by them previously to their making acquaintance with the simple remedy under consideration. V. IDELSON, M.D.

1820. *Jamison on Bromide of Potassium in Ovarian Acne.*—In the *Practitioner*, May 1889, p. 346, Dr. Jamison draws attention to the value of constitutional remedies, in preference to local measures, in the treatment of some forms of acne, and especially shows the value of bromide of potassium in cases of acne coincident with ovarian irritation. The following case illustrates the experience met with by the author. A young lady, aged 22, had suffered for four years, her face being quite disfigured. Various remedies had been tried in vain. She consulted Dr. Jamison for debility, and profuse menstruation every fortnight, one period being scarcely over before another began. There was a good deal of pain and tenderness over the right ovary, beginning about two days before the period. She was ordered 20 grains of potassium bromide three times a day for a month. At the end of the month the face was much better and the period had not come on. She was told to stop the bromide, and in two days the period came on very profusely, together with a fresh crop of acne on the face. The medicine was at once resumed, and the hæmorrhagia, pain, and backache passed off in four days; no fresh spots appeared on the face. During the second month the face steadily improved, and for the next four periods the bromide was taken just before and during their continuance; by this time the complexion was nearly clear. In several cases the author has met with similar results, and in one the bromide rash was produced; but there is no difficulty in differentiating one rash from the other, inasmuch as the medicinal rash never affects the sebaceous glands. The author concludes that amongst the causes of acne in women, ovarian congestion is one; and that when acne is due to that cause, potassium bromide is our most efficient remedy.

1821. *Maddox on a Simple Inhaler.* — In the *Practitioner*, May 1889, p. 349, Mr. Maddox, M.B., records a simple method of inhaling volatile remedies—such as menthol, eucalyptus, &c.—for the relief of affections of the throat and lungs. Coil a piece of paper into the shape of a cigarette and fix it with gum. Then insert into one end a small uncompressed piece of absorbent cotton-wool, upon which a drop or two of the desired medicament has been poured. Air is now drawn through the tube by the patient, who holds the other end between his lips as though he were smoking. In a case of pulmonary phthisis the author found much relief from inhaling oil of peppermint in this manner.

1822. *Tappeiner on the Action of Sodium Fluoride.* Fluoride of sodium produces in mammals, when administered internally in 0·5, or by subcutaneous or intravenous injection in 0·15 doses per kilo.—(1) a condition of sleepiness and weakness consequent upon paralysis of the vascular nerve-centres; (2) convulsions which sometimes affect single limbs, and sometimes the whole body, and may in some animals assume an epileptiform character. They are not reflex, are independent of disturbances of respiration and of circulation, and proceed from the spinal and higher centres; (3) paralysis of the vaso-motor centre; (4) acceleration and deepening of respiration, with subsequent paralysis; (5) vomiting; (6) salivary and tear secretions, which are not prevented by atropin; (7) early cadaveric rigidity.

1823. *Schulz on the Action of Sodium Fluoride.*— 1. Fluorine, administered subcutaneously as the sodium salt, acts clearly upon the central nervous system. The action shows itself in a paralysing of the brain and the spinal column, and proceeds thence to the peripheral nerves. 2. The action thus proceeding shows itself first in a pecular stimulation of the voluntary muscles, made evident by quivering and strong contractions of individual or several muscle groups. Its end is muscular paralysis with, especially amongst cold-blooded animals, very evident rigidity of the muscle substance. 3. The dyspnœa consequent upon the administration of the drug is evidently to be referred to the above-mentioned affection of the muscles, those of respiration not escaping. 4. The profuse salivary secretion is also characteristic. The remaining glands, except the kidneys, were, in the author's experience, not obviously affected. The occurrence of albumen in the urine is explicable by the hyperæmia of the kidneys as well as the other abdominal organs, a specific stimulation being perhaps also exerted on the kidney parenchyma. 5. The heart still beats amongst warm-blooded animals after death appears to have taken place. Vascular ruptures and the consequent extravasations of blood in the mucous membrane of the stomach, as well as in the pulmonary tissue, were not constantly observed. 6. Chronic administration of small doses of sodium fluoride by the mouth gave no results in Nabuteau's observations, and a doubtful one in those of the author. 7. Fluoric acid may be breathed all day by cats without results, even when strong enough to produce corrosive effects on glass. 8. The primary action of the inhaled acid is to produce the early symptoms following on injection of the sodium salt.

Bertram C. A. Windle, M.A., M.D.

DERMATOLOGY.

RECENT PAPERS.

1824. Woskresenskij. — On the Penjdeh Ulcer. (*Archiv f. Derm. u. Syph.*, 1889, Heft 1.)

1825. Loewenberg.—On the Nature and Treatment of Boils, especially in the External Ear. (*Ibid.*)

1826. Rosenthal.—On Acne Varioliformis. (*Ibid.*)

1827. Saalfeld.—On Menthol. (*Ibid.*)

1828. Rosenthal.—On Anthrarobin. (*Ibid.*)

1829. Besnier. — On Acute Nodular Disseminated Lupus. (*Annales de Derm. et de Syph.*, vol. x., No. 1.)

1830. Pontoppidan.—On a Case of Alopecia following Injury. (*Monatsh. für Prakt. Derm.*, vol. viii., No. 2.)

1831. Lemoine.—On the Treatment of Epithelioma by Potassium Chlorate. (*Ibid.*, No. 4.)

1832. Raymond. — On Hyperidrosis of the Face. (*Archives de Neurologie*, 1888; in *Ibid.*)

1833. Bruns.—On the Curative Effect of Erysipelas on Tumours. (*Ibid.*)

1834. Róna.—On Lichen Ruber (Planus). (*Ibid.*, No. 6.)

1835. Behrend.—On Impetigo Contagiosa and Herpes Tonsurans. (*Berlin. klin. Wochensch.*, No. 4; *Ibid.*, No. 7.)

1836. Kühnemann.—On the Anatomy and Histology of Veruca Vulgaris. (*Ibid.*, No. 8.)

1837. Török.—On the Anatomy of Scabies. (*Ibid.*)

1838. Behrend.—On Nerve Lesions and Alopecia Areata. (*Berlin. klin. Wochensch.*, 1889, No. 3; *Ibid.*)

1839. Besnier.—On Prophylaxis of Alopecia Areata. (*Journal of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 76.)

1840. Brocq.—On Folliculitis and Perifolliculitis Decalvans. (*Ibid.*)

1841. Robinson.—On Lichen Planus (Wilson), and Lichen Ruber (Hebra). (*Ibid.*, Nos. 77 and 78.)

1842. Dupuy.—On Tattoo-Marks. (*Ibid.*, No. 78.)

1843. Zielewicz, Dr.—On the Treatment of Lupus by Lactic Acid. (*Nowiny Lekarskie*, No. 3, 1889, p. 119, with 2 figs.)

1844. Lominsky, Dr. Fedor I.—On the Treatment of Anthrax by Hypodermic Injections of Carbolic Acid. (*Vratch*, No. 3, 1888, p. 45.)

1845. Goodhart.—A Case of General Atropic Scleroderma. (*Illustrated Med. News*, February 1889, p. 99.)

1846. Lassar, Dr.—On the Treatment of Acne. (*La Clinique*, April 11, 1889.)

ART. 1824. *Woskresenskij on the Penjdeh Ulcer.*—The author (*Archiv f. Derm. u. Syph.*, 1889, Heft 1) reports on 34 cases of Penjdeh ulcer which he observed within three months in the Military Hospital of Merv in 1887. The incubation period lasted from three to eight days. There was a secondary nodular eruption in twelve cases; lymphangitis in sixteen cases. Lymphadenitis was only seen twice. The author considers the disease to be caused by a miasm, and that the constitutional infection takes place through the lung. He does not consider that this disease is the same as the so-called *bouton de Biskra*, Indian ulcer, &c. Troops should be removed from places where it is endemic and dry places for encampment chosen. The inflammation is usually acute during the initial period. The best method of treatment at that time is rest, warm baths, and applications of zinc ointment. Cauterisation is seldom useful. In exceptional cases bichloride of mercury was used.

1825. *Loewenberg on the Nature and Treatment of Boils, especially in the External Ear.*—The author (*Archiv f. Derm u. Syph.*, 1889, Heft 1), in consideration of the doctrine that boils are produced by pathogenic cocci, which become transferred from one hair follicle to another, institutes a treatment based on the antiseptic action of boric acid. He applies to the extremities a saturated solution of boric acid in alcohol. On other parts of the body he applies boric acid in substance, and covers it with wadding, which is frequently moistened with alcohol. When the affection is in the nostril the solution is applied with a brush. When the boils are in the external ear he makes an incision only when he is certain that pus is present and the centre of the follicle can be reached. Otherwise the treatment consists in bathing the ear with boric solution. When an outbreak of boils is general, boric baths are used.

1826. *Rosenthal on Acne Varioliformis.*—Rosenthal (*Archiv für Derm. u. Syph.*, 1889, Heft 1) demonstrated to the Dermatological Union of Berlin a case of acne varioliformis, in which the eruption was not limited to the frontal region, but was spread over the whole head. The case was treated successfully with an ointment containing resorcin and boric acid, of each two parts; vaseline, twenty parts.

1827. *Saalfeld on Menthol.*—The author (*Archiv für Derm. u. Syph.*, 1889, Heft 1) states that he has found a 3 to 5, or even 6, per cent. solution of menthol in spirit more effective in pruritus than solutions of boric and salicylic acid. An ointment of menthol and lanoline he had found very useful in pruritus senilis. (On the other hand, Dr. Isaac stated that experiments with menthol in Lassar's *Clinique* showed that it was useless).

1828. *Rosenthal on Anthrarobin.* — Rosenthal (*Archiv für Derm. u. Syph.*, 1889, Heft 1) showed to the Dermatological Union of Berlin three psoriatic patients who had been treated with anthrarobin without much success. He had, on the whole, found that the effect of anthrarobin is much less than that of chrysarobin, while the disadvantages are equally great. Koebner had also found that anthrarobin worked much slower than chrysarobin, or even pyrogallic acid.

1829. *Besnier on Acute Nodular Disseminated Lupus.*—At the weekly meeting of the physicians of the Hôpital St. Louis, M. Besnier (*Annales de Derm. et de Syph.*, vol. x., No. 1) showed a girl of 4 years old, who seemed well nourished, and on whose skin there was a number of small flattened nodules of a yellow-reddish appearance, slightly coloured, but with a special colloid transparency, which he considered to be characteristic of lupus. The eruption had appeared a year before, after an attack of measles. There are about forty of these small nodules, which are not larger than a pin's head. The epidermis over them is smooth, and there is no desquamation. M. Besnier considered that the diagnosis of lupus was confirmed by the fact that inoculation in a guinea-pig of a small fragment of tissue caused tuberculosis in the animal.

1830. *Pontoppidan on a Case of Alopecia following Injury.*—The author (*Monatsh. für Prakt. Derm.*, vol. viii., No. 2) states that a girl, 10 years old, was subjected to an operation on the left carotid region on account of a glandular swelling. Following the operation there was paralysis of the muscles of the eye on the left side, ptosis and contracted pupil, indicating injury to the sympathetic nerve. A loss of hair took place in areas on the back of the head afterwards, and six weeks after the operation the whole back of the head was symmetrically bald, the skin being smooth and normal. The bald part corresponded to the area of the major and minor occipital nerves and the posterior branch of the orbicularis magnus. Within three months after the operation a fresh crop of hair began to cover the bald places. The author believes that etiologically alopecia areata must be divided into two classes—one class being parasitic, and the other neurotic.

1831. *Lemoine on the Treatment of Epithelioma by Potassium Chlorate.*—The author (*Monatsh. für Prakt. Derm.*, vol. viii., No. 4) believes that in potassium chlorate we have a remedy which has great curative properties, and which may even bring about a complete cure. He specially recommends it in cases in which epithelioma occupies the skin and the adjacent mucous membrane when the knife is not applicable. As the effects are slight, it is not to be tried in cases where the disease is making rapid progress.

1832. *Raymond on Hyperidrosis of the Face.*—The author (*Archives de Neurologie*, 1888; *Monatsh. für Prakt. Derm.*, vol. viii., No. 4), in consideration of the fact that the perspiration is only a local symptom of a lesion which is sometimes in the sympathetic, sometimes in the central nerves of the system, recommends the application of a constant stream to the spinal cord, and such drugs as bromide of potassium, and more especially iodide of potassium.

1833. *Bruns on the Curative Effect of Erysipelas on Tumours.*—The author (*Monatsh. für Prakt. Derm.*, vol. viii., No. 4) relates twenty-two cases of tumours which were the seat of an idiopathic erysipelas. Amongst these cases three of sarcoma (diagnosis confirmed by microscope) were permanently cured. Two cases of multiple keloid after burns were completely cured. In four cases of lymphoma of the neck some of the glands disappeared and some became smaller. In five cases erysipelas was artificially produced. In three cases of carcinoma of the mamma one was not changed, one became one-half smaller, and one was reduced to a small induration in the scar the size of a pea. A multiple fibro-sarcoma was diminished. An orbital sarcoma was unchanged.

1834. *Róna on Lichen Ruber (Planus).*—The author (*Monatsh. für Prakt. Derm.*, vol. viii., No. 6), in reporting eight further cases of this disease, refers to two in which the symptoms were of an unusual nature, corresponding to cases which have been previously referred to as lichen ruber scarlatiniformis. In both these cases the disease was acute, associated with symptoms of fever and a typical temperature, and sometimes chronic redness of large parts of the body. Swellings which were the seat even of pemphigoid eruptions manifested themselves either with or without the papular eruption of lichen, and masked the nature of the disease. The papules themselves were sanguineous in appearance. In the progress of the disease they changed colour slightly, desquamated, and became superficially atrophied. The patients became thinner, and in one case the patient died from intercurrent pneumonia. In this case the mucous membrane of the throat, epiglottis, tongue, and nose were to a large extent affected. This case is very similar to one published by Lavergne (*Contributions à l'Etude de Lichen Planus*, 1883).

1835. *Behrend on Impetigo Contagiosa and Herpes Tonsurans.*—Dr. Behrend (*Berlin klin. Wochensch.*, No. 4; *Monatsh. für Prakt. Derm.*, vol. viii., No. 7) exhibited at the Berlin Medical Society on Jan. 9 of this year two children, the younger having patches of ringworm on the chin and trunk, while the elder sister had impetigo contagiosa on the face.

1836. *Kühnemann on the Anatomy and Histology of Veruca Vulgaris.*—Dr. Kühnemann (*Monatsh. für Prakt. Derm*, vol. viii., No. 8) has studied the anatomy of veruca vulgaris, and also has made an exhaustive study of the literature of the subject. The conclusion to which he has come is that common warts are not caused by any active hypertrophy or lengthening of the papillæ of the cutis, with a resulting thickening of the epidermis, but that they are caused by an independent affection of the epidermis itself. The disease leads to a hypertrophy of the whole epidermis, and to abnormal cornification. It is the expression of a pure anomaly of this process. Technically, therefore, it is a dyskeratosis (parakeratosis).

1837. *Török on the Anatomy of Scabies.*—The author (*Monatsh. für Prakt. Derm.*, vol viii., No. 8) has examined seven cuniculi, and has come to the conclusion that the acarus does not inhabit the prickly layer, but the undermost part of the middle layer of the epidermis. Further, that the eczema of scabies is not caused by scratching, but by irritating substances given off by the acarus.

1838. *Behrend on Nerve Lesions and Alopecia Areata.*—Dr. Behrend (*Berl. klin. Wochensch.*, 1889, No. 5; *Monatsh. für Prakt. Derm.*, vol. viii., No. 8) has repeated Joseph's experiments by which that investigator believed that he had demonstrated baldness as the result of section of the sympathetic in the neck in animals, and has been unable to confirm the result. In all the animals on which he had operated there was no fall of hair. Altogether he experimented on nine cats, of which one lived 7 days, another 10, a third 12, others 20, 22, 63, and 120 days, and of two animals which he showed to the Medical Society, one had been 20 and the other 10 days under observation. In the discussion which followed, Joseph himself stated that he had not always got a positive result.

1839. *Besnier on Prophylaxis of Alopecia Areata.* Dr. Besnier, as reported by Dr. Brocq in *Jour. of Cut. and Genito-Urin. Dis.*, vol. vii., No. 76, states that he has seen the husband contract alopecia areata from the wife, and the father from the daughter at a period when the disease seemed at an end, because this is the period in which less care is exercised. A commission of the Academy of Medicine of Paris, of which Dr. Besnier was chairman, has prepared the following rules of instruction regarding measures to be taken with those attacked by alopecia areata:—That no subject of the disease can claim his admission or retention as a right in a public institution, such being subordinate to the results of an open investigation by the physicians of the institution. That measures be taken for the protection of healthy subjects against contact with regions of the body attacked with alopecia areata. That the diseased surfaces should be wholly hidden with some dressing, wigs, adhesive plasters, collodia, or traumaticines. That the hair should be cut short over the whole head. The beard should be shaved or cut short. The diseased parts to be washed with hot water and soap every morning. Precautions to be continued after a cure seems assured, to prevent recurrences taking place. Exchange of hats, caps, &c., to be prevented. The use in common of articles of toilet and bedding to be prevented. Any object that has been in contact with the head of a patient with alopecia areata to be disinfected or destroyed.

1840. *Brocq on Folliculitis and Perifolliculitis Decalvans.*—In August, 1888, Dr. Quinquaud made a communication on a special form of folliculitis, followed by an incurable alopecia which simulates alopecia areata. Dr. Brocq (*Jour. Cut. and Genito-Urin. Dis.*, vol. vii., No. 76) makes a further statement regarding this type of affections. They are, he states, characterised—1. By a follicular and perifollicular inflammatory process. 2. By a complete destruction of the hair papilla, giving rise to a definite alopecia. 3. By the formation of a tissue having more or less the appearance of cicatricial tissue. 4. By a certain tendency which the lesions have to systematise and group themselves. In the first variety the follicular and perifollicular inflammatory process is here slight, for it is not characterised by much tumefaction, and the scalp has only a light rosy tint surrounding the affected hair. This hair soon falls spontaneously, and the inflammatory process is calmed, but it has produced a complete atrophy of the hair papilla, and only a white, smooth, ivory-like portion of scalp is seen, which seems to be atrophied, and upon which there is no vestige of hair or lanugo. The second variety corresponds to the disease of Dr. Quinquaud. The inflammatory lesions are here characterised by a suppurative folliculitis, but the spots remain isolated, discrete, and distinct from each other. There is produced a sort of smooth, white, depressed cicatrix, at which point the skin of the scalp appears atrophied and thinned. The third variety is observed especially in the beard, and here the inflammatory lesions are much more marked than in the preceding varieties. They are characterised by large follicular and perifollicular pustules, by redness and thickening of the skin, by the production of crusts and scales, and there is here confluence of the adjacent lesions. In a word, the disease resembles a sycosis of the non-parasitic variety.

1841. *Robinson on Lichen Planus (Wilson) and Lichen Ruber (Hebra).*—Dr. Robinson (*Jour. of Cut. and Genito-Urin. Diseases*, vol. vii., Nos. 77 and 78) discusses fully the pathology and symptoms of these affections, which he regards as quite distinct from each other. From a study of the appearances presented by recent lesions of lichen planus, he considers it clear that the process is an inflammatory one, and not primarily a hypertrophy of the epidermis, either of the rete or of the corneous layer. The inflammatory process occurs especially in the papillæ and upper part of the corium, and the cell infiltration from the upper sub-papillary horizontal plexus of blood-vessels does not come from the upper surface of the vessels alone, as the cells surround the vessels; and the same is true of the vessels which do not run horizontally. The changes observed in recent papules in the corneous and rete layers are so variable that they can, he thinks, be regarded as secondary conditions. In chronic lichen planus the epidermis is thickened in all its layers, while the round-cell infiltration is much less than in the acute lesions. This is what is apt to occur in the ordinary inflammatory infections of the skin, the acute state showing much cell infiltration and little epidermic formation, and *vice versâ* in chronic inflammations. On the other hand, in affections of the epidermis hypertrophies show more round-cell collection the greater the hypertrophy, as, for instance, in psoriasis and epithelioma. If in lichen planus the round-cell infiltration were caused by pressure from the epidermis, consequent upon the increase in its thickness, we should find it most marked in the chronic forms of the disease. In lichen ruber the corneous layer is greatly increased in thickness in the region of the papule, the thickness being greatest in the central part, and diminishes in amount as the periphery is approached. This layer presents an irregular undulating character, the most depressed parts corresponding to the situations of sweat-gland or hair-follicle orifices. The epithelia are not arranged in flattened lamellar plates, as was often observed in lichen planus, but have often a more or less polygonal shape, with a vertical diameter as great as the horizontal one. The stratum lucidum is not distinct, and the granular layer is not increased in thickness. The rete mucosum is slightly increased in thickness in some places, but usually there was no change in this layer. The changes observed in the recent papule point to the disease being an affection of the corneous layer of the epidermis—a parakeratosis, and not an inflammatory affection of the corium. The amount of emigration and liquid transudation were altogether too little to justify the diagnosis of an inflammatory process. The lesions of lichen ruber, then, are not inflammatory in origin, but arise as the result of a parakeratosis; there is a hypertrophy of the corneous layer from a continuous collection of epidermic cells, the result of an anomaly in the process of their production and casting off, and these cells by pressure upon the underlying tissues produce the changes occurring in the rete and corium. In lichen planus the lesions were considered to owe their origin to a circumscribed inflammation in the papillæ and upper part of the corium, and any changes in the rete or corneous layer to be secondary to the changed nutritive conditions which are the result of the inflammatory process. If the conclusions from his observations are correct, there is certainly no relationship between the factors producing the eruptions in lichen ruber and lichen planus. Arsenic, when given in proper amount, seems to have a decided and prompt action in lichen ruber. As a result of his investigations and whole argument Dr. Robinson concludes that—1. In doubtful cases lichen planus and lichen ruber are to be diagnosticated, not by the form of lesion alone, but also by the whole symptoms and course of the eruption. 2. That lesions resembling in form those of lichen ruber and lichen planus exist in other diseases. 3. That Unna's division into lichen planus, lichen obtusus, and lichen acuminatus is an unnecessary if not an incorrect division. 4. That the cases reported by Unna were not examples of the disease described by Hebra. 5. That the same is true of the cases reported by Boeck and Lavergne. 6. That no cases have been reported which show absolutely, or even with probability, that lichen ruber and lichen planus are but two forms of the same disease. 7. If an identity of etiology existed, such cases could have been reported, as lichen planus is a rather frequent disease. 8. Finally, in the absence of proof of a tendency to a combination of the two forms of eruption, or to a transformation of the one form into the other form, either as an eruption or of individual lesions, and from the fact that the symptoms, course, prognosis, histology, and, to a certain extent at least, the effects of certain drugs upon the eruption are different, there appears to be no good ground for the view that there is any relationship between lichen ruber and lichen planus.

1842. *Dupuy on Tattoo-Marks.*—Dr. Brocq (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 78) states that, *à propos* of Dr. Variot's communication to the Society of Biology, Dr. Dupuy said that in the islands of the Indian Archipelago they cause tattoo-marks in Europeans to disappear by practising a new tattooing with the juice of the *Carica papaya*. The operation leaves no cicatrix, and takes away red tattoo-marks as well as the blue ones. G. THIN, M.D.

1843. *Zielewicz on Lactic Acid in Lupus Vulgaris.*—In the Polish monthly *Nowiny Lekarskie* (*Medical News*), No. 3, 1889, p. 115, Dr. Zielewicz, of Poznan (Posen, Germany), publishes an able paper on the treatment of lupus by the external use of lactic acid, as has been first recommended by Professor Moorhof-Mosetig (*Centralblatt für Chirurgie*, No. 12, 1885; *vide* also the LONDON MEDICAL RECORD, Dec. 1885, p. 524) and, later on, by Drs. Lurtz (*Wiener Med. Blätter*, Nos. 19 and 20, 1885), Doyen (LONDON MEDICAL RECORDER, June 1888, p. 249), &c. The author tried the remedy in three inveterate cases of an extremely obstinate character. His plan consisted in painting the diseased spots (by means of a brush) with an 80 per cent. solution of the acid every second or third day, for from five to eight weeks. In one of the patients (a lad of 18, suffering from lupus of the face and feet), complete cure was obtained in six weeks; in another (a woman of 23, with facial lupus), a more or less marked improvement ensued in two months; while in the third (a man of 19, with extensive lupus of the lower extremities, neck, &c.) the results were very unsatisfactory. All the patients complained of intense pain, caused by the procedure. Dr. Zielewicz arrives at the following general deductions. 1. The best means for destroying lupoid nodules is cauterisation with either galvanocautery or thermocautery. 2. Lactic acid is by far inferior to the former. 3. Contrary to Moorhof-Mosetig's and Doyen's assertions, the drug, in common with other chemical caustics, does not spare the surrounding healthy tissues, and that even when it is most carefully applied by means of a pencil.

4. The procedure is exceedingly painful. 5. In more or less successful cases, the duration of the treatment is by no means shorter than that of thermo-cauterisation (and, according to Hermann and Spitzer, is even longer than in cases treated by chloride of zinc). 6. On the whole, the action of lactic acid does not differ in anything from that of other weaker chemical caustic means. It consists in exciting exfoliation of the cuticle, which may be peeled off in pieces after painting the given spot about twice.

1844. *Lominsky on Hypodermic Injections of Carbolic Acid in Anthrax.*—Being deeply impressed with the excellent results (100 per cent. recoveries), which had been obtained from carbolic acid in anthrax by Drs. I. V. Jarnovsky (*vide* the LONDON MEDICAL RECORD, Nov. 1884, p. 499), Schaeffer (*ibid.*, October 1885, p. 438), and Strizover (*ibid.*, May, p. 192), Dr. Fedor I. Lominsky, of Kamenetz-Podolsk (*Vratch*, No. 3, 1888, p. 45), resorted to their method in four successive cases of a very severe kind. His success was so uniform and complete that he feels justified in endorsing Strizover's and Schaeffer's opinion, according to which 'carbolic acid represents a specific remedy for anthrax, just as quinine is a specific means for malarial fevers.' Dr. Lominsky's patients were male peasants, aged 26, 35, 15, and 27. In three of them malignant pustule was situated on the face (chin, and near the eye), in one, on the chest (near the nipple); that is, in all in most dangerous regions. One came under the writer's care on the fifth day of the disease (the pustule having appeared at the site of a cut made on the patient's chin by a barber during shaving); two on the fourth, and one on the eighth. In all the four there were present fairly high fever (up to 40°·3 C.), great prostration, headache, giddiness, as well as intense infiltration and œdema around the pustule, and enlargement of lymphatic glands in the neighbourhood. In every one of the cases the diagnosis was established beyond any doubt by demonstrating the bacilli anthracis in a bit excised from the bottom of the ulcer. In one case a 5 per cent. carbolic solution was injected under the skin, at four spots around the pustule, the individual dose being 2 grammes (half-a-syringeful at each spot); the injections were repeated twice daily; the total amount of the solution used was 12 grammes. In the remaining three cases either a 2 or a 3 per cent. solution was employed, the individual dose varying from 2 to 3 fluid grammes (divided into four or six equal portions to be injected at so many points around the ulcer). The total amount of the solution injected in an individual case oscillated between 12 and 21 fluid grammes. The treatment, however, was not limited to the injections. In all the cases the pustule was deeply and freely incised and energetically cauterised either with a concentrated carbolic acid, or with fuming nitric acid, or with potassa fusa, for several successive days. The wound was dressed with iodoform. Internally, *vodka* (aquavitæ) and quinine or antipyrin were administered. A marked and steady improvement both of general and local symptoms invariably set in from the very beginning of the treatment. The patients were discharged cured respectively on the forty-fourth day (after admission), forty-second, fifty-eighth, and thirty-sixth. Dr. Lominsky says that his patients bore the injections very well, the procedure being nearly painless. He warns, however, against the employment of a 5 per cent. solution in the areas supplied with a delicate skin (*e.g.* scrotum, eyelids, &c.), since it may sometimes give rise to sloughing of a small portion of integuments at the spot of the injection. [Drs. Indütnyi and Levantüëff are also fully satisfied with Raimbert-Jarnovsky's method, as may be seen from the LONDON MEDICAL RECORD, Dec. 1886, p. 538. Meanwhile Dr. D. Morozoff finds it 'far from being reliable,' and the procedure 'painful;' *vide ibid.*, p. 537. The old thesis to the effect that facial anthrax as well as that of the body is by far more dangerous than that of the neck and limbs, received lately fresh support in some investigations published by Dr. Nazaroff in the *Vratch*, No. 41, 1886, p. 730. In 1884 he had been sent by the Russian Medical Department to the Novoladoga District to struggle with a serious epidemic of malignant pustule broken out amongst the local peasantry. The total number of cases which had come to his personal knowledge was 187, seven of them (all fatal) being those of an intestinal variety, the remaining 180 those of a cutaneous one. Of the latter, 32 (17 per cent.) died. In 57 patients the pustule was situated on the head and face, the mortality being 26·31 per cent. In 21 the body was the site of anthrax, with the mortality of 22·73 per cent. In 27 the neck was affected, the percentage of deaths being 18·52. In 36 the pustule occupied one of the upper limbs, the mortality being 13·88 per cent. And in 39 patients it was found on the lower limbs; only 5·12 per cent. of these patients died.—*Rep.*] V. IDELSON, M.D.

1845. *Goodhart on a Case of General Atropic Scleroderma.*—In the *Illustrated Med. News*, February 1889, p. 99, Dr. Goodhart describes and gives a plate of a little girl, aged six years, who was suffering from general atropic scleroderma. The child had never been healthy; in March 1887 she had measles, and about two months later it was noticed that she did not care to play with other children, and that she commenced to stumble about and to walk on her toes. In June 1887 her legs became bent at the knees, and the arms commenced to be painful; in August she was unable to walk; her face became 'drawn,' and she could not open her mouth more than half an inch. When admitted under the author's care she was just like a skeleton with a skin drawn tightly over it. She lay chiefly on her left side, the arms and legs being flexed, and the skin was so tight and small that flexion and extension were extremely limited. The face presented the aspect of extreme emaciation, all its natural features having departed by reason of the contractions and indentations of the skin. Hardly a spot of sound skin remained anywhere, though the soles of the feet were fairly healthy. Elsewhere all the surface had the characteristic features of scleroderma, the skin being welded down upon the bones beneath into a firm, fixed, inelastic mass of a rather deep bronze tinge, considerably mottled by patches more or less wanting in pigment, giving to the body a generally scarred appearance. RICHARD NEALE, M.D.

1846. *Lassar on the Treatment of Acne.*—The different varieties of acne present many features in common, and are amenable, up to a certain point, to the same treatment. The first object to be attained is a degree of desquamation of the affected skin, for which purpose the author prescribes—℞ naphthol, 10 parts; precipitated sulphur, 50 parts; soft soap, 20 parts; and vaseline, 20 parts, made into an ointment, which is smeared over the affected areas and left on for from half an hour to an hour. It is then washed off with hot water and repeated on the following days until desquamation takes place. The following ointment is also used with the same object in view :—℞ Resorcin, oxide of zinc, starch, of each 5 parts, in 10 parts of vaseline; to be used in the same way.

ALFRED S. GUBB.

OPHTHALMOLOGY.

RECENT PAPERS.

1847. LIPPINCOTT, J. A.—On Binocular Metamorphopsia produced by Correcting Glasses. (*Archives of Ophthalmology*, March 1889.)

1848. CUIGNET, M.—Periodic and Intermittent Affections of the Eyes. (*Recueil d'Ophthalmologie*, February 1889).

1849. DOYNE, R. W.—Recurrent Swelling of the Upper Lids. (*Trans. Ophthal. Soc.*, viii.)

1850. COLLINS, W. J.—Spontaneous Transient Œdema of Eyelids. (*Trans. Ophthal. Soc.*, viii.)

1851. KNAPP, H.—Second Series of One Hundred Successive Cataract Extractions without Iridectomy. (*Archiv. of Ophthalmology*, March 1889.)

1852. MORRIS, MALCOLM, AND ROBERTS, H. LESLIE. On Pemphigus associated with Essential Shrinking and Pemphigus of the Conjunctivæ. (*Brit. Jour. of Dermatology*, April 1889.)

ART. 1847. *Lippincott on Binocular Metamorphopsia produced by Correcting Glasses.*—Most surgeons who have had any experience in the correction of ametropia have from time to time met with cases in which with a perfect visual result with each eye singly, and single binocular vision of an object at the fixation-point, the patients have complained that the glasses make them giddy, that the floor slopes up or down, that stairs appear in the wrong position, and that, in short, with their glasses on the world in general is out of joint. Not unfrequently these symptoms are produced by faulty centreing of the lenses, so that objects are viewed through the periphery; and, when this is not the case, the patient usually soon learns either to get rid of them by a slight inclination of the head or to disregard them. But there remains a residuum of cases in which complaint is made that the shape of objects is distorted, the page in reading being widened out above or below; these are mostly cases in which cylinders have been given with axes in an oblique direction and not parallel to each other, and are most troublesome to those who have been accustomed to observe the form of objects accurately, as artists and carpenters. It is not the first time that attention has been directed to this subject; Culbertson read a paper on it at the meeting of the American Medical Association in May 1888, and explained it by assuming that in binocular vision the recti cause a certain amount of rotation of the globes on their antero-posterior axes, and suggested, as a remedy, altering the direction of the axis of one or both cylinders. Savage published a paper on the same subject in the *American Jour. of Ophthalmology* of September 1888; he, also, attributed the symptoms to rotation of the globes, but thought that this was produced by the non-symmetrical action of the oblique muscles, and that it occurs when the principal meridians are oblique, and is due to an effort on the part of the patient to make these meridians horizontal and vertical. The writer in the paper before us gives a very simple explanation of some of the phenomena, and one which can easily be verified by experiment. It is pointed out that in reading the binocular field is very small, and that each eye sees clearly only the corresponding margin of the page; if this be admitted, the explanation becomes easy; all rays which pass through a cylindrical lens undergo prismatic aberration, except such as pass through the meridian corresponding to its axis; if, therefore, a vertical line be looked at through a convex cylinder held obliquely, so that the upper extremity of its axis is to the right, the axial ray which passes from the upper extremity of the line to the fovea centralis will pass through the cylinder to the left of the axis (*i.e.* through a prism with its base to the right): hence the point will appear displaced to the left, for a similar reason the lower end of the line will be displaced to the right, so that a vertical line, viewed through an oblique cylinder, appears to be rotated in the opposite direction to the cylinder. With a concave cylinder the conditions are of course reversed. Therefore, with convex cylinders, whose axes diverge above, a page will appear wider below than above, the reverse being the case with concave cylinders. It is less easy to see why occasionally, even with a cylinder placed vertically, there is sometimes an inequality of the sides of the book, so that the top and bottom appear to slant. It seems to us that the author's explanation of this is less satisfactory. This appearance is more difficult to investigate, as it is by no means constantly produced in an emmetropic eye; and in our experience it is very rare; indeed, we have never met with a case in which it has been complained of with vertical prisms. The symptom is one which, if it does not disappear by practice, would seem to admit of no remedy, except the compromise of using a weaker cylinder, or omitting it altogether. More than once we have ourselves been driven to adopt the latter course, in the case of adults who had never had their astigmatism corrected, and who required cylinders with their axes at or about 45°. The author considers the suggestion of altering the axes of the cylinders to be both unscientific and ineffectual. Patients with uncorrected astigmatism would no doubt often suffer from metamorphopsia were it not that they do not derive their ideas of the form of objects from one sense alone. Occasionally when glasses have been worn metamorphopsia is present when they are removed. The author quotes the case of a young lady as an instance of this, who, he says, was 'restored by the use of correcting glasses to a veritable state of nature—to the condition in which she found herself when she first began to use her eyes.' We must confess that we have not so far observed this curious effect of spectacles.

1848. *Cuignet on Periodic and Intermittent Affections of the Eyes.*—The author divides these cases into two classes, the one in which periodicity constitutes the most striking feature, and the other in which it only forms one of its features. In the last part of his paper he insists on the value of large doses of quinine in all cases which show any indication of periodicity, whether this consists in their being truly intermittent or in the recurrence of exacerbations of the symptoms. As examples of the first class, he describes rather fully two cases, of transitory and recurrent œdema of the eyelids. The first was a lad, aged 16, in good general health, no history of malaria or of exposure to it, subject, however, to headache, having the character of migraine. On waking one morning at seven, he found the lower eyelids swollen, with a colourless œdema; only the lax tissue of the lids was affected, the borders being free. There was no pain or tenderness. Slight pain in the head. No reflex source of reflex irritation could be discovered. Two hours later the œdema had increased, and assumed a rosy tint. In four hours it had reached the side of the nose, and it gradually spread over it. Eight hours after its onset the whole of the swelling had disappeared, and there remained only a slight itching. The patient dined at 7 P.M. Two hours later the swelling reappeared, there being no apparent digestive trouble; it lasted some hours, and disappeared. At seven the next morning it reappeared, spreading as on the previous day. At 10 A.M. the author gave 7½ grs. of quinine; four hours after onset it disappeared, but recurred at 4 P.M., and lasted three hours. The quinine was increased to 12 gr. Two more doses of quinine were given; there were two subsequent attacks of shorter duration. The quinine was increased to 12 gr., and no recurrence took place. The other case the author saw ten years ago; age not given, but it was an adult female. For three days she had suffered from an itching of the left lower lid, coming on at 5 P.M., and lasting two hours; it increased daily in intensity, but ceased immediately upon taking a single dose of 15 gr. of quinine. Considering the time that had elapsed, the absence of details as to hours of meals, digestive troubles, and possible causes of irritation, we cannot see that this case is of any value. The author also describes an intermittent lachrymation from which he himself suffered. It was copious, affected the left eye only, and came on at first after exposure to the air, but recurred at the same time on the two following days without any exposure; it ceased entirely after several doses of quinine. The following week the right eye became similarly affected, and was relieved in the same way. Then a similar relapse in left eye, also relieved, then another relapse occurred which was unaffected by quinine and lasted four months, and was accompanied by blepharitis and eversion of the punctum. It was not relieved by opening the canaliculus, but disappeared spontaneously after lasting four months. The author considers that the condition was secretory neurosis commencing as an intermittent affection and becoming constant. The writer then proceeds to discuss how far such affections as glaucoma and phlyctenular ophthalmia are periodic in character. That the premonitory symptoms of glaucoma have a tendency to intermit is of course well known, but it is a question whether the recurrence towards evening is not due to fatigue, rather than to anything really intermittent in the nature of the disease; again, in phlyctenular inflammations of the conjunctiva, although there are often frequent relapses, they do not occur at regular and short intervals, as is the case with typical intermittent affections. Both these conditions, however, the writer considers should be treated by large doses of quinine.

1849. *Doyne on Recurrent Swellings of the Upper Lids.*—This case in some respects resembles that quoted in the last paper. The patient was a girl, aged 15. She had never menstruated. For the last six months she had had typical attacks of megrim, developing with glimmering cloud, spreading gradually over both eyes, followed by headache over one eye only, and passing off in two hours with vomiting. Fourteen months ago occasional swelling of the lids came on, sometimes one and sometimes both. Sometimes they are swollen out to the level of her brows, half closing her eyes. Lately the swelling has appeared about once a month. Myopia 1·5 D; normal vision, with correction. In the discussion on this case Mr. Gunn mentioned one under his care, occurring in a young woman. She suffered from recurrent attacks of palpebral œdema, which was always ushered in by intolerable itching. The intervals between the attacks varied, and the patient thought were influenced by diet.

1850. *Collins on Spontaneous Transient Œdema of Eyelids.*—A child of 7. Two hours before being seen, rapid swelling of the lids, amounting to complete closure, came on without any cause that could be discovered. Rapid resolution took place, and there was no recurrence during the three or four weeks he was under observation.

1851. *Knapp on a Second Series of One Hundred Successive Cataract Extractions without Iridectomy.* We commented on Dr. Knapp's first series of one hundred cases in the LONDON MEDICAL RECORDER, June 20, 1888, pp. 255, Art. 622. In doing so, while calling attention to the excellent results attained, we pointed out that the defects of this method were the large number of secondary operations required (54 per cent), and the frequency of prolapse of the iris (12 per cent.). In the present series, the results obtained are even a little better, namely, V. over 20-40ths in 58 per cent. (as against 50 in the first series), less than 20-40 and more than 10-200 in 41 (as compared with 50). There was one failure in each series. The author evidently does not consider a secondary operation worth striving to avoid, and discission of the capsule was performed in seventy-four cases in the present series. Only six instances of prolapse of the iris occurred (as against twelve in the first hundred). In case 18 it was seen on the 4th day and excised on the 6th, the final result being 20-40ths. In case 30, the prolapse was cut on the 14th day; plastic iritis occurred, and the V. obtained was only 10-200; no discission; patient suffering from Bright's disease. In case 31, the cataract was hypermature; a small prolapse of iris occurred, which was cut on the 14th day; result, 20-70ths. In case 40, a small prolapse followed an injury; it was abscised, and the result was 20-40ths. In case 46, the eye was lost from irido-iritis, preceded by striated keratitis, attributed to corrosive sublimate. The closed pupil was opened by an iridectomy performed with Tyrrell's hook, but it closed again. In case 84, vitreous was lost at the operation; prolapse seen on 3rd day, and cut on the 5th and 9th; result, 20-30ths. Of these six cases, five occurred in the first fifty cases. As regards the operation itself, in about twenty cases the anterior chamber was irrigated with a solution of bichloride of mercury (1 in 10,000) instead of Panas solution, but it was found necessary to inject only a very small quantity, or irritation was set up, and the author prefers a 3 per cent. solution of boric acid used warm. Escape of vitreous occurred in three cases, but the results were good, 20-200ths, 20-50ths, and 20-30ths. These results cannot fail to place the operation without iridectomy in a more favourable light than heretofore. They certainly show that a single operator employing this method may obtain a great and increasing percentage of successes. And if we accept the figures it must be admitted that after a secondary operation the visual result is not inferior to that procurable by other operations. Whether an individual operator, who has been accustomed to perform extraction with an iridectomy, would at first obtain equally good results on abandoning it is, we think, extremely doubtful. On one point we certainly should have liked more definite information—namely, as to the condition of the pupil. It is said that posterior synechiæ were present 'in many cases.' Adhesions are so common after any operation that it would have been surprising if they had not been frequent, but we should have liked to have had some information as to the size and position of the pupil. Dr. Knapp considers that the risk incurred in needling an opaque capsule is not worth taking into consideration. He admits, however, that 'in several cases some inflammation (cyclitis, with diffuse capacities in the vitreous) followed, and took several weeks to disappear.' In the concluding paragraph the author makes a new claim on behalf of extraction without iridectomy. 'The iris, spread out like a velum interpositum between the corneal section and the ciliary body, protects this, the most susceptible part of the eye, from the deleterious substances that may enter through the wound.'

1852. *Morris and Roberts on Pemphigus associated with Essential Shrinking and Pemphigus of the Conjunctivæ.*—This forms a valuable contribution to the literature of a subject concerning which there is a good deal of difference of opinion. Cases are occasionally met with in which an extremely chronic process takes place, of which the prominent features are a very gradual obliteration of the upper and lower conjunctival cul-de-sac, consequent inversion of the margins of the lids, impaired movements of the eyes, and the conversion of the cornea into a dry, horny, opaque substance. In the early stage the appearance of the conjunctiva somewhat resembles that produced by long-standing trachoma, and this diagnosis has sometimes been made. From the history of a large number of these cases there can be no doubt that in many it is associated with pemphigus; in a majority pemphigus vesicles have at some time appeared in the skin or mucous membrane of the mouth, and in a few they have been seen on the conjunctiva itself. But it seems equally clear that an identical or very similar condition of the conjunctiva may arise without there being any eruption of vesicles. Treatment appears to be of no avail. Lubricants of various kinds have been used, and the affected conjunctiva has been dissected off, and its place occupied by grafts from the rabbit; but it has been of no avail, and the new mucous membrane has been attacked by the same process, the shrinking has continued, and the cornea has become opaque from destruction of the glandular elements in the conjunctiva. The name 'essential shrinking' of the conjunctiva, originally proposed by Von Graefe, certainly graphically describes the disease. In the paper the twenty-eight cases which have been published up to the present time are arranged in a tabular form. W. Adams Frost.

Nearly twenty courses of scientific and medical instruction for medical students will be carried on at Cambridge in the Long Vacation, including, besides chemical, botanical, anatomical, and physiological courses, Dr. Anningson and Mr. Robinson on the examination of water, air, and foods, chemically and microscopically, and Prof. Roy and Mr. Adami on pathology, morbid histology, and bacteriology.

PATHOLOGY.

RECENT PAPERS.

1853. Kahlden.—The Pathological Anatomy of Addison's Disease (*Beiträge zur pathologischen Anatomie der Addison'schen Krankheit*). (Virch. *Arch.*, Band cxiv., Heft 1, S. 65.)

1854. Lesage, A., and Legrand, H.—Nervous Neoplasmata (*Des néoplasies nerveuses d'origine centrale*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 8, p. 344.)

1855. Owen.—On the Geographical Distribution of Rickets, &c. (*Brit. Med. Jour.*, Jan. 19, 1889, p. 113.)

1856. Fichtner, Dr. R.—The Pathological Anatomy of Diabetes Mellitus (*Zur pathologischen Anatomie der Nieren beim Diabetes Mellitus*). (Virchow's *Archiv*, Band cxiv., Heft 3, S. 400.)

1857. Kümmell.—On Cysts of the Vagina (*Ueber cystische Bildungen in der Vagina und im Vestibulum Vaginæ*). Virchow's *Arch.*, Band cxiv., Heft 3, S. 407.)

1858. Buchanan.—On 'Fungus Hæmatodes.' (*Glasgow Med. Jour.*, February 1888, p. 81.)

1859. Mackenzie.—Primary Cancer of the Kidney. (*Illustrated Med. News*, December 1888, p. 269.)

1860. McKee.—A Case of Endothelioma of the Liver. (*Illustrated Med. News*, April 1889, p. 3.)

Art. 1853. *Kahlden on the Pathological Anatomy of Addison's Disease.*—1. The pigment deposit in morbus Addisonii takes place in the deeper layers of the rete Malpighi, and in the corresponding outer layer of epithelial cells of the hair-bulbs. 2. The pigment is not formed in these cells but in the cutis, and from this is transported by wandering cells to the place of deposition. 3. Each epithelial cell receives the pigment from several such wandering cells. 4. General pathological grounds, as well as the relation of the pigment wandering cells to the vessels, render a derivation of the pigment from the blood probable. 5. This derivation is not to be referred to disease of the vessel-wall, and still less to hæmorrhage, since such conditions are not constant, and when present are secondary in their nature.

1854. *Lesage and Legrand on Nervous Neoplasmata.*—Tumours exist formed essentially by neoplasia of the elements of the nervous tissue; either embryonic or adult (nerve-cells, cells of the arachnoid, neuroblasts; more rarely, fibres of Remak). They may be formed by fœtal inclusion outside the cerebro-spinal axis. In other cases, they are to be observed in the nerve-structures themselves, either infantile or adult. These nervous tumours do not present lines of demarcation between themselves and the surrounding nerve-tissue. They are distinguished from sarcomata by their embryological origin and their histological characteristics; they appear to invade from place to place, but do not generalise themselves. Their relation to inflammation is not yet sufficiently studied, but it seems that nerve tumours may be formed by a process of repression of adult elements at the embryonic stage, which repression may be followed by a new evolution more or less imperfect towards the adult nerve type, whatever it may be.

1855. *Owen on the Geographical Distribution of Rickets, &c.*—The conclusions arrived at are thus summarised:—1. There is no district in the British Isles in which acute and subacute rheumatism and malignant disease are not common in the sense defined in the inquiry paper. 2. Rickets, though not unknown in rural districts, is mainly a disease of towns and industrial regions, and especially of large industrial towns; it is rare in the rural districts of Scotland, the North of England, North Wales, and Ireland, Ulster excepted; it is more common in the rural districts of Ulster and of the rest of England, and exceptionally prevalent in Cornwall, Kent, and North Essex. 3. Chorea, like rickets, is mainly a disease of towns and industrial regions, though it is by no means unknown in rural districts; it is fairly evenly distributed in the rural districts of the four countries; it is rare in seaside watering-places; and it is, by exception, somewhat rare in the south as well as the west of London, and not, generally speaking, common in Glasgow, even in the poorer quarters. 4. The distribution of chorea is further affected by that of acute and subacute rheumatism, its prevalence diminishing as the latter disease becomes rare. 5. Urinary calculus exhibits a decided tendency to affect the eastern sides of the two islands; its chief seat in South Britain is the county of Norfolk, from which it radiates into the neighbouring counties, and in North Britain the angle of land above Aberdeen, from which it extends down the east coast to the Forth; it shows a (less decided) tendency to appear in the coal-fields, being especially prevalent in the Black Country; and prevalence does not otherwise seem due to geological conditions.

1856. *Fichtner on the Pathological Anatomy of Diabetes Mellitus.*—The author describes two cases of diabetes which terminated by coma, the breath having the characteristic odour. The glycogenic degeneration was observed in the kidneys of both, and besides a fatty degeneration of the greater part of the cortex. No traces of cell-necrosis or of inflammatory processes were discoverable. The question is raised as to whether the passage of acetone or some similar substance through the kidneys may have caused the fatty degeneration.

1857. *Kümmell on Cysts of the Vagina.*—The author considers his subject under the following divisions:—*a.* True cysts. I. Cysts of the vagina which may arise from (1) true vaginal glands; (2) closed mucous crypts; (3) lymph follicles and the lymphatic apparatus generally; (4) remains of the Wolffian ducts; (5) remains of the duplicity of the Müllerian ducts; (6) hygromata of the connective tissue; (7) œdema and extravasations of the connective tissue. II. Cysts of the vestibule—(1) cysts of the hymen; (2) cysts of the labia minora. *b.* Gaseous cysts of the vagina. These last the author believes originate in the lymphatic apparatus. A digest of earlier papers, with a table of bibliographical references, add to the value of the paper.

Bertram C. A. Windle, M.D.

1858. *Buchanan on 'Fungus Hæmatodes.'*—In the *Glasgow Med. Jour.*, February 1889, p. 81, Dr. George Buchanan writes that the name 'fungus hæmatodes' indicates a morbid condition of a kind so characteristic, that he trusts the term will not be banished from new works on surgery. Its clinical characteristics distinguish it from most other tumours; it is usually associated with encephaloid cancer, though sometimes with soft large-celled sarcoma, and it has been known as the sequel or recurrence of a well-marked fibroid scirrhus. Indeed, when tumours return after more than one excision, it is often noticed that each succeeding recurrence becomes more malignant in its clinical characters, till in the end it assumes what the author terms 'fungus hæmatodes'—a soft, pulpy, sprouting, highly-vascular mass, prone to ulcerate, and ready to bleed on the slightest abrasion. The following case is a good illustration. A man, aged 60, was admitted in December 1888 into the infirmary; two years previously he had noticed a small lump on the left arm; it was movable and free from pain, until four months before admission, when it began to enlarge rapidly and to assume a purple colour. For a few days before he was seen by the author, the growth bled whenever it was touched. On admission the bleeding was seen to be coming from an ulcerated spot the size of a shilling, but the hæmorrhage was soon stopped by pressing a little dry boracic lint on the spot. The tumour itself was situated on the ulnar side of the arm, and projected about three inches from the surface; it was nodular, the nodules resembling knuckles of a purple colour projecting outwards, and very soft and pulpy. As there was no doubt about the malignancy of the growth, the author amputated through the elbow-joint, and the patient made a good recovery. On examination it was found that the disease did not start from the periosteum, but surrounded and embraced the shaft of the ulna, to which it adhered firmly. The microscope proved it to be a large spindle-celled sarcoma.

1859. *Mackenzie on a Case of Primary Cancer of the Kidney.*—In the *Illustrated Med. News*, December 1888, p. 269, the following case is recorded:—Eliza H., aged four years, admitted into the hospital, Sept. 5, 1874. The child had always seemed well until three months before admission, when she began to complain of paroxysmal pain chiefly about the umbilicus. About this time she had whooping-cough, and vomited blood every day for about five weeks. The abdomen was also noticed to enlarge just about the umbilicus, and continued to do so, especially on the right side. There was no history of jaundice, or œdema of legs up to the time of admission; the bowels had been loose for three months, and the motions dark and offensive. The abdomen was greatly enlarged, and the superficial veins were distinctly enlarged from the level of the diaphragm to the lower part of the abdomen. There was dulness over the whole of the right side to some distance beyond the middle line, with marked fulness in the right lumbar region. Some weeks after the child was admitted the author decided to explore the growth with a small trocar, but nothing was withdrawn except some soft material, which on microscopic examination revealed undoubted cancer cells. The tumour went on growing until Dec. 19, when the child died from the obstruction caused to the circulation by the size of the growth. On making a *post mortem* examination an enormous tumour was found occupying nearly the whole of the abdomen, springing from the right side, and pushing the intestines downwards, and to the left. The tumour was irregularly globular, with excrescences on the surface, firmly attached to the liver, which capped it like a suprarenal capsule does the kidney. The tumour evidently replaced the right kidney, and weighed 22 lbs., the other part of the child weighing 39 lbs. On examining the tumour it was found to be a typical example of medullary cancer. Primary malignant disease of the kidney is not rare, but this case is remarkable on account of the size of the tumour, the patient being only four years old.

1860. *McKee on a Case of Endothelioma of the Liver.*—In the *Illustrated Med. News*, April 1889,

p. 3. Mr. McKee records a peculiar case of endothelioma of the liver. The patient, a woman, aged about 50, suffered from ascites, and all the signs of portal obstruction. After tapping the abdomen the liver was felt to be much enlarged, and a hard mass was distinguished in the left lobe. No treatment was of any use, and in a few months she died. The *post mortem* examination revealed nothing abnormal in any organ except the liver. This organ weighed eight pounds; it was smooth on the surface, more than usually consistent, and reddish-brown in colour. The prominence noticed during life in connection with the left lobe was found to consist simply of gland substance. Section showed a general and marked increase of the interstitial tissue, and in addition several nodules scattered throughout the organ. To the naked eye the case appeared to be an example of carcinoma with cirrhosis. On microscopic examination the author came to the conclusion that the growth was of a very rare nature, and originated in the endothelium of the veins and capillaries; no proliferation was observed in the epithelium either of the parenchyma or ducts; the arteries were normal. No similar case has been recorded in the author's experience, and some very interesting drawings are given describing the characteristics of the growth.

RICHARD NEALE, M.D.

REVIEWS.

ARTICLE 1861.

Suggestive Therapeutics: a Treatise on the Nature and Uses of Hypnotism. By H. BERNHEIM, M.D. Translated from the Second and Revised French Edition. By CHRISTIAN A. HERTER, M.D. New York and London: G. P. Putnam's Sons. 1889.

WE regret that to have a good book on this subject it was needful to get Dr. Bernheim's work translated into English. The time was when England was to the front. No one has done more in explaining the phenomena of hypnotism than James Braid, of Manchester, whose *Treatise on Nervous Sleep or Hypnotism* is probably now better known in France than in Britain. It was Braid who first showed that it was not necessary to have recourse to a magnetic fluid as Mesmer imagined, and that no mysterious force emanates from the mesmerist. In order to be hypnotised, the subject must give his consent to the influence of the operator, which after the hypnotised state is established he can no longer resist. During the mesmeric mania of 1851, Drs. J. Hughes Bennett and Carpenter made some acute observations confirming the doctrine of suggestion; but little farther attention was paid to the subject till, about 1880, some physicians on the Continent began to renew and extend the former experiments on hypnotism. Since then an extensive literature has been given to the world, especially in France, Germany, and Italy. Dr. Bernheim is known as the chief of the Nancy school. He traces everything to suggestion and expectant attention. He asks for no new force; his results, though surprising, are accomplished by agencies of which we have already had experience in our own lives. Dr. Bernheim holds that there is no real difference between the hypnotic state and natural sleep, save that the one is induced in a peculiar manner, and that the other is spontaneous. In our dreams we experience the same feelings as the hypnotised person. We are not called upon to believe in the transfer of sensations through the action of different metals, nor are we treated with monstrous statements about the effect of medicines in closed bottles held near the patients. The power resides within the subject, not without. Nevertheless, the disciples of animal magnetism have not abandoned their colours. They still maintain the existence of their imponderable fluid which under certain conditions can act at a distance without any suggestion.

Dr. Chazarain has in two pamphlets* laid down the laws of action of this force, which he calls human polarity, and endeavours to show that the failures of his predecessors are owing to their ignorance of these currents, which, coming from without, take a certain course through the body. There is no theory worth discussing to explain how suggestions have such a power. According to Brown-Séquard certain portions of the brain or nervous system are inhibited, thrown out of function as it were, and the activity of other objects is heightened in the hypnotised person. The memory of past events and the power of observing concomitant events are suspended and greatly diminished, and the power of reasoning is much impaired; hence the subject yields entirely to the suggestion of the hypnotiser. He accepts it as a reality, and acts upon it. The subject is not unconscious, but his consciousness is confined to one single train of ideas. Probably some confusion has arisen by the translation of Dr. Bernheim's book rendering the French word *conscience* into the English consciousness, for the two words are not equivalents of one another, *conscience* standing for consciousness, knowledge, and conscientiousness. Nevertheless, Dr. Bernheim seems sometimes to use his words loosely, as when he talks of a patient being unconscious, and at the same time feeling sad. The hypnotised person is not unconscious, save in the deeply lethargic state, any more than a man in a dream is unconscious. He is conscious of what he dreams, though often ignorant of his surroundings and antecedent condition.

A good deal of Dr. Bernheim's work is devoted to criticising and combating statements which are not compatible with the theory of suggestion or expectant attention. He examines the statements of Binet about visual hallucinations being altered by optical apparatus. Binet affirmed that spectres seen, or believed to be seen, by the hypnotised person could be recognised to be double if looked at through a prism, or their images could be reflected from a mirror. Bernheim has seriously examined these statements, and finds that these changes in the spectres perceived are really the result of suggestion. The hypnotised person perceives that real objects are doubled when he looks through the prism, and therefore assumes that the spectre suggested to his mind should also be double.

Dr. Bernheim's studies upon hallucination and retro-active hallucination open a new field for injury in psychology. He thus defines retro-active hallucinations: 'We can suggest to subjects that at some period, now past, they saw such and such an act committed, and the image created in their minds seems like a living memory, which governs them to such an extent as to appear an incontestable reality.' In like manner Dr. Bernheim claims that he can give an order to a hypnotised person which he will execute after he is awake under the illusion that he is carrying out a resolution of his own. In this case we cannot help repeating, with M. Ribot, Spinoza's saying, 'Our illusion of free will is but ignorance of the motives which make us act.'

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* *Découverte de la Polarité humaine.* Par le Docteur Chazarain et Ch. Décle. Paris: O. Doin. 1886. *Les Courants de la Polarité dans l'Aimant et dans le Corps humain.* Par le Docteur Chazarain et Ch. Décle. Paris, 1887.

Dr. Bernheim gives us at length a history of the course and progress of hypnotism. He describes his method of hypnotising and the diseases in which he has found his method of treatment to be useful. As regards the dangers of hypnotism he observes: 'In my already long practice I have never seen any harm produced by sleep induced according to our method, for the suggestion is always present as a corrective to any disagreeable symptoms which may arise.'

The principal inconvenience which Dr. Bernheim has noted is a tendency in certain persons after being hypnotised to go to sleep spontaneously. He gives a striking account of a lame beggar, named Castellan, who got into a house in the Var and hypnotised a young woman. He came back when she was alone and outraged her while in the condition of 'lucid lethargy.' She left her father's house and followed the beggar, for whom in her waking moments she only felt fear and disgust. With great difficulty the unfortunate young woman was delivered from the influence of Castellan. Three physicians confirmed the conclusions of a medico-legal report, and the beggar, found guilty by a jury, was sentenced to twelve years hard labour.

Dr. Chazarain gives another case of bad effects resulting from hypnotising. A student of medicine returning for some months to his village in the South of France gave graphic accounts of the prodigies done by the physicians of the Salpêtrière upon some of their patients. His cousin, a very intelligent girl, got so much interested that she allowed herself to be hypnotised by him. This was done so effectually that she could not be recalled from the hypnotic state, and since then she has become insane.

If hypnotising becomes a frequent practice those who occupy themselves with criminal law will need to make themselves acquainted with the subject. It is quite proper, and indeed every way advisable, that these dangers should be known. Nobody should allow himself to be hypnotised by anyone whose character does not command complete trust. But if the benefits derived from the hypnotic treatment are real, it is justifiable to have recourse to it, and with proper precautions the dangers can be obviated.

Dr. Bernheim's book, which contains 420 pages, leaves nothing unsaid from the point of view from which he regards the question. We doubt not that it will much increase the interest which is already felt in the subject both in Great Britain and America. As far as can be judged, without comparing the translation with the original, Dr. Herter has done his work well. He has put Dr. Bernheim's French into good English which is precise without being stiff. W. W. IRELAND, M.D.

ARTICLE 1862.

Leprosy an Imperial Danger. By H. P. WRIGHT, M.A., Rector of Greatham, Hants. London: J. & A. Churchill. 1889.

THIS is an instructive book on the distribution and spread of leprosy, giving in small bulk much valuable information on the geographical distribution of the disease extracted from periodical literature, and from the valuable writings on this subject of Leloir, Besnier, Dr. Davidson, Dr. Drognat-Landré, and others. The author reminds us how widespread the disease is and how numerous are its victims. Lepers in Europe are not confined to Norway, in which in 1884 there were about 900, but are numerous in the Southern Russian provinces, in Turkey and Greece, while they are scattered over certain parts of Italy and Spain, and are stated to be numerous in the mountainous district of Lafoes in Portugal. In the Maltese islands there were twenty-eight lepers in 1886. They are found on the Mediterranean shores of France, in the Riviera di Ponente, and in Nice, fresh cases occurring there in families otherwise perfectly healthy. In India, by the last report, there were 131,618 lepers, but some writers maintain that there are half a million in that country. In Canton there are 900 in one hospital; but some 2,500 at large who live by begging. There are many lepers in Egypt. The disease prevails in nearly every part of Africa, infests Madeira, St. Helena, Madagascar, Mauritius, and the Isle of France. Norwegians have brought leprosy into Minnesota, Wisconsin, and Michigan; while the Chinese have established leprosy in California, San Francisco, and Oregon. Lepers are found in South Carolina, New Orleans, Louisiana, and Texas, and in these parts the author states the disease is on the increase. In Central America, Brazil, and the West Indian Islands leprosy is known to be common.

The distribution of the disease shows that it spreads in the most opposite climates, from Greenland, Iceland, and Norway to the tropics.

In an important chapter headed 'Is Leprosy Contagious?' the author extracts from Dr. Besnier's pamphlet and other sources the history of a number of cases in which the disease seems to have been communicated from man to man. This is really the important chapter in the book, and although it is impossible to shut one's eyes to the fact that leprosy can hardly be considered very contagious, yet under certain conditions it is undoubtedly communicated by contact. It is impossible otherwise to explain the facts detailed in this work.

Those interested in the subject will find concise and well-arranged extracts up to the most recent date from the most important publications on the subject which have appeared during the last few years, and the author, by bringing this information into a compact form, within the reach of many readers who would otherwise have no opportunity of referring to the original documents, has conferred on medical men a distinct benefit, for which he deserves their gratitude. The fact that the author is not a medical man in no way detracts from the value of the work.

ARTICLE 1863.

The Treatment of Lateral Curvature of the Spine, with Appendix on the Treatment of Flat-foot. By BERNARD ROTH, F.R.C.S. London: H. K. Lewis. 1889.

THIS work is based on the author's article 'Lateral Curvature of the Spine,' published in Heath's *Dictionary of Surgery*. Roth is sufficiently known to give his writings a general interest, and surgeons will be glad to welcome his latest monograph, which has the merit of lucidly and concisely conveying his views. The treatment of lateral curvature is the pet aversion of most orthopædic surgeons, and the reason is not difficult to find. It is not due to any want of inventive ingenuity on the part of experts, but to the fact that the spinal column, subject to its environment, does not lend itself to mechanical device aimed at counteracting osseous deformity. In the earlier stages, again, we fear practitioners fail to recognise the earliest indications of disease, and only when toc late for a really artistic result avail themselves of those muscular exercises of which Roth is so conspicuous an advocate. Relative to this laxity of supervision the author says:—'A mother notices that a shoulder or a hip is beginning to grow out in a child, often a girl, at the onset of puberty. The family doctor is called in; the patient is stripped, and the trunk flexed. If there be no decided or marked irregularity in the bent spine the parent is assured that the patient "will grow out of it," and that nothing special need be done, except perhaps lying down daily for a short time.' And yet, he adds, it is at this 'time when there is no osseous deformity that complete cure is possible.'

Roth's method of recording cases of lateral curvature had better be given in his own words. 'The patient is placed in front of the surgeon, standing without shoes, with knees extended and feet together, all clothing having been well removed to below the iliac crest, so that the gluteal cleft is just visible. . . . After inspecting the patient laterally and in front, the trunk should be flexed as far as possible, the knees being kept extended, and the arms allowed to hang down loosely, so that the scapular muscles are thoroughly relaxed. Now the level of the ribs posteriorly, uncovered by the shoulder-blades, should be carefully examined for any inequality. In the most common form of lateral curvature with dorsal convexity to the right, if there be any osseous deformity present, the right ribs will be more or less unduly prominent, sometimes so slight that a good light and a well-trained tactus eruditus are necessary to make out a difference on the two sides. I now take a tracing of the ribs posteriorly as follows. I feel for the lower angle of the left shoulder-blade, and, fixing one end of a pliable metal tape with my left hand at that point, I carefully mould the tape close to the ribs, across the spine, to the lower angle of the right shoulder-blade, which is likewise to be carefully felt for. With the copying pencil I mark the metal opposite the dorsal spine, then carefully remove the tape, upper edge downwards, on to sheet of quarto-size paper, and draw a tracing inside the tape, marking on the paper the point where the tape crossed the spine. The pencil line is afterwards inked, and the tracing cut out and folded down the middle, opposite the point marking the spine, and we have now an accurate record of the ribs posteriorly.' A record can also be taken across the loins opposite the third lumbar vertebra. Appropriate tracings are also taken where there is osseous deformity of the ribs anteriorly. We have given these instructions in some detail because we think highly of them. They give an accurate tracing; they afford a scientific method of estimating increase or diminution of deformity; it is a useful chest guide in cases of infantile paralysis of the spinal muscles, and it is an infinitely better method than a diagrammatic outline of the spine, which may be placed by change of posture into much better position before treatment is commenced. A metal tape has been employed by other writers; but as the measurements are made in the erect posture, the scapulæ interfere with any accurate deduction. A committee appointed by the Clinical Society of London, before whom Roth demonstrated his methods, reported that 'the amount of improvement which may be hoped for in any given case may not unsafely be gauged by the improvement which the patient can voluntarily effect (directed or helped by the surgeon) in his or her position when first seen.' *

Space will not permit us to enter into the details of treatment which Roth suggests. Briefly it may be summarised in the phrase 'treatment by posture and exercise,' and this may be further analysed into (*a*) Re-education of the patient's muscular sense as to an erect or improved position. (*b*) Improved position to be maintained at all times while sitting or standing. (*c*) Attention to dress. (*d*) Systematic training of the spinal and other muscles, including the development of the thorax. (*e*) Attention to general health. (*f*) Subsequent home treatment to prevent relapse.

Contrary to the claims of some other surgeons, Roth insists that once osseous deformity has occurred it is hopeless to expect from treatment anything but an improved position and the prevention of further deformity. He bases these conclusions not merely on his own practice but also on measurements taken by the method we have described in the cases of those patients who have worn supports. We cannot quite see how this should be in advanced cases. An apparatus so constructed as to admit of some muscular exercises, and removed for a more extended series, should relieve the muscles of much unnecessary strain. To prop a crooked spine is almost an instinct. To merely wear a support without strengthening the muscles in the meantime would be undoubted folly. That bony deformity may be removed by the absorption due to pressure, and growth occur on removal of pressure, we have often noticed in the treatment of knock-knee by splints, and there is no inexorable law which negatives this in the case of the spine apart from the mere mechanical difficulties.

We can highly recommend Roth's book as a distinct acquisition to surgery. There is no padding in it. It is a faithful chronicle of honest work by a careful and original clinical observer.

ROBERT JONES.

ARTICLE 1864.

Physiological Notes on Primary Education and the Study of Language. By MARY PUTNAM JACOBI, M.D. Messrs. G. P. Putnam's Sons.

THIS work is of value as expressing some personal knowledge in the work of educating a child, and some original thoughts on the methods of education in general. The most interesting part is the author's attempt to train a child's mental faculties and habits of thought; we should, however, have liked to have had the child more fully sketched as to its physiological condition, as well as to its mental progress. One of the greatest failures in training, as it is often practised, is that mental faculties only are considered as the end aimed at, and the whole of the physiological power and the moral faculty are too often neglected, while the special peculiarities of the child are not sufficiently taken into account.

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* See *Clinical Society's Transactions*, vol. xxi., 1888, p. 301.

Dr. Jacobi gives a very good account of her method of training a young child by daily observation and record of facts observed in some living objects, chiefly plants in their stages of growth. This seems to have been very useful in teaching, not only observation, but also correct thinking about the facts seen. This process of daily recording in a diary what the child herself observed gave a means of regulating the child's use of words and facility of language. Children naturally tend to incessant incoordinated chatter, and this spontaneous use of words and vocal sounds needs to be trained, as much as its natural, spontaneous, and purposeless movements. We cannot agree that 'words are fossils'; many words correspond to impressions made upon the senses by the impressions produced by objects; the child must be taught many such words at an early age, while it is true that abstract terms which do not correspond to qualities of visible objects are only fit for later teaching. Many of the statements made are philosophical rather than physiological; thus we find it said that 'The mind of the child, like that of the race, looks over the surface of all things at once; its progress is not from the simple towards the complex, but from the superficial and obvious towards the profound and hidden.' Dr. Jacobi prefers to teach the child all about flowers before considering the leaf, as the flower is more conspicuous and interesting from its colours and the varieties of its parts. Such argument is not quite conclusive; the size, the form, and the parts of a leaf, and the resemblances and differences between various leaves. are more simple to demonstrate than the parts of a flower; the child can know nothing of the life history of a plant, and its modes of nutrition, till the leaves have been fully studied.

In the second portion of this work we have an interesting discussion on 'The Place for the Study of Language.' It is true that the process of acquiring language is one of the highest physiological faculties of man; it seems to us that the true value of the literary form of education is to be decided by the effects which we see follow rather than by any discussion of what ought to be its results. In such discussion it seems to us that but little real advance is made by mixing metaphysics with physiology, and by supposing an unknown 'consciousness' to be generated in the brain, as in the following passage:—'It is then, in some mysterious way, that the consciousness or conception of speech is generated in the brain and mind of the speaking individual.' The suggestions given as to showing an object to a child and teaching its name are very clear and practicable, and well worthy of the attention of all teachers.

This book is well worth reading; parts of it will repay a more prolonged study. We hope that upon a future occasion the very decided opinions of this author will be given to the public in a more extended form, and illustrated by the record of a wider experience and a further accumulation of physiological facts.

ARTICLE 1865.

Observations on Some Rare Diseases of the Skin. By JOSEPH FRANK PAYNE, M.D., Oxon. Smith, Elder & Co. 1889.

DR. PAYNE, in the book now before us, reprints from the thirty-eighth volume of the *Transactions of the Pathological Society of London* papers on granuloma Fungoides, Erythrasma, and a Nodose Condition of the Hair, and from the *British Medical Journal* a paper on Pruritus Hiemalis. The paper on granuloma fungoides is in itself a sufficient justification for republication. It contains the account of a patient who died in St. Thomas' Hospital under Dr. Payne's care, with a record of *post mortem*, histological and bacteriological examinations, and is illustrated by two coloured plates showing the naked-eye appearances of the disease, and a plate showing the histological changes in the tissues. Although the disease is well described in several works on dermatology, Dr. Payne's account of the appearances exhibited by his patient are well worthy of study, notwithstanding that the condition of the case did not materially differ from that of other recorded cases. The chief feature of the disease, as is well known, is that in many parts of the body tumours or tubercular masses of firm elastic consistency are developed in patches of inflamed skin. Dr. Payne notes that these tumours were at first covered with epidermis, but when this was shed off a moist excoriated surface was left, giving rise to a little serous discharge, but not copious and continuous as in eczema. The tumours were tender, in some cases painful, but pain was not a marked feature. The lymphatic glands were swollen, but not notably affected. The patient died of exhaustion.

It was observed that some lumps on the arms got better, while other new ones formed.

Dr. Sharkey, in the notes on the *post mortem* examination, remarks that on making a section of a large ulcerating new growth below the edge of the jaw it was seen to be of a pale pinkish colour, of uniform translucent appearance, and pretty firm consistence. The affection was found to be confined to the skin and subcutaneous tissue, not invading the muscles and deep parts. Careful cultivation experiments were made by Mr. Ballance, who found that serum taken from the affected tissue by proper precautions produced no growth on blood serum, and when dried on cover-glasses, no organisms were found after staining. Histologically, the disease was found to be essentially granulation tissue or a chronic inflammatory growth. Dr. Payne does not agree with Ranvier in considering the structures lymphatic. He differs from Hochsinger and Rindfleisch in believing that whatever the cause of the disease may be, it has not yet been shown to be a micro-organism.

Workers in bacteriology will find in the concluding part of this paper instructive observations regarding the precautions to be taken to avoid confounding granular deposits with micrococci, a mistake that there is reason to believe is not unfrequently made.

Most medical men of experience must be familiar with the localised dark patch of skin not uncommon on the upper and inner part of the thigh in men, most usually producing no inflammatory or other symptoms. Whether this condition, which is known as erythrasma, is due to a specific parasite is still a subject of discussion. Dr. Payne is disposed to believe that the *microsporon minutissimum*, originally described by Burchardt, is specific in this disease, although he recognises that the matter still requires further investigation. Drawings are given of the parasite, and instructions regarding the best method of demonstrating it. The two short papers that follow on beaded hairs and pruritus hiemalis do not call for much remark. Drawings are given of the nodose hairs, and for the 'frost itch,' which is so common, Dr. Payne considers that glycerine is useful, but, as he truly remarks, little more is to be done than fulfil the true indication, which seems to be to soothe and protect the skin as thoroughly as possible.

ARTICLE 1866.

The Diagnosis and Treatment of Extra-Uterine Pregnancy. By JOHN STRAHAN, M.D., M.Ch., M.A.O. (Royal University of Ireland), Fothergillian Gold Medallist of the London Medical Society, 1886, &c. (Jenks Prize Essay of the College of Physicians of Philadelphia). Philadelphia: P. Blakiston, Son, & Co. 1889.

DRS. WILSON, THEOPHILUS PARVIN, and INGHAM, the members of the Jenks Prize Committee, have done well in awarding the prize to Dr. Strahan, for whatever may have been the character of the remaining six essays, Dr. Strahan's is undoubtedly of a high order of excellence. The essay is an able summary of the two most disputed questions in relation to ectopic gestation. The author adheres, substantially, to Mr. Lawson Tait's well-known theories, mainly on the ground that the distinguished operator in question has had a wider experience of the subject than any other authority. Dr. Strahan enters at great length into the most recent opinions of gynæcologists and obstetricians, as expressed in their writings, and in discussions at societies. Literary work of this kind involves much patient labour. He strongly advocates instant abdominal section 'and removal of the whole trouble' as 'the proper treatment of extra-uterine gestation in the pre-rupture stage, whether diagnosed or suspected with great probability.' A good example of the author's summaries is to be found at page 116; the passage relates to the management of the placenta in the primary operation. The present reporter may be excused for reminding the author that a second-hand reference is always unsafe, while a third-hand quotation is utterly unreliable. In the paragraph on interstitial ectopic pregnancy, page 117, we read: 'It (interstitial pregnancy) is probably very rare. There are only five or six specimens in all the British museums. Mr. Alban Doran has stated that there are two in the museum of the London Hospital, but Tait says these are evidently broad ligament pregnancies.' This passage is a paraphrase of a sentence in p. 50 of Mr. Tait's *Lectures on Ectopic Pregnancy and Pelvic Hæmatocele.* Had Dr. Strahan looked up the original sources whence these statements were derived—namely, 'Interstitial or Tubo-uterine Gestation, with Notes on Similar Cases, in the Museums of London Hospitals' (*Trans. Obstet. Soc.*, vol. xxiv., 1882, p. 227), and Ramsbotham's *Principles and Practice of Obstetric Medicine and Surgery*, he might not entirely agree with Mr. Tait's opinion, at least, as far as E*h* 105, London Hospital Museum, is concerned. The recognition during operation of a sac which happens to consist chiefly or entirely of uterine wall is very important. 'If a case' of interstitial gestation 'could be diagnosed before rupture, the treatment would be to dilate the cervix, divide the septum in the wall of the uterus, and empty the pregnant cornu.' Such is Dr. Strahan's opinion, but he would hardly have given advice of that kind had he studied the original specimens described in the reporter's memoir quoted above. Any meddling with the septum, which may be fairly thick, would be almost certain to cause rupture of the thin and tense upper portion of the interstitial sac, nor could the septum be easily reached in many cases.

Dr. Strahan's prize essay will be of great value to every operator who either has a case of ectopic gestation awaiting treatment, or who is ready to operate at any moment when rupture of a fœtal sac is diagnosed. The opinions and experience of men who have operated frequently are of incalculable value to those who wish to follow in their footsteps. Dr. Strahan has collected opinions and records of experience of the desired quality. The surgeon, harassed at the prospect of an operation, cannot conveniently hunt up references in newspapers and transactions. He can find what he wants almost at a glance in Dr. Strahan's essentially practical monograph.

ALBAN DORAN.

ARTICLE 1867.

Curvatures of the Spine. By NOBLE SMITH, F.R.C.S.Edin., L.R.C.P.Lond. (Third Edition.) London: Smith, Elder, & Co. 1889.

THIS is a work which treats of those curvatures not caused by diseased bone. The author first deals with the question, 'Will the child grow out of its deformity?' and, judging from the number of severe cases which now exist, and which must have had a commencement, he decides that the majority of slight cases do not get well of themselves. Asked 'Is interference necessary on the score of health, or is the question simply one of appearance?' he answers that, although in any particular and exceptional case the general health may appear to be unaffected by the deformity, sooner or later pain will occur, and the general health will suffer. Arguing from these premises the author very properly urges that there should be as little delay in commencing treatment as possible. In this he agrees with most orthopædic surgeons, who are sorely handicapped in their curative efforts by the retrogressive tendencies of delay.

The treatment recommended in this little volume consists in a combination of muscular development, mechanical pressure, and partial rest, improvement in position being maintained by adaptations of the instrument recommended. The author strongly condemns what he terms the indiscriminate application of the 'movement cure.' He bases his objections upon the fact that alone it has little or no effect in removing fixed curves; that in the severely affected its benefits are very transitory; and that a danger exists in early and weakly cases of mistaking angular curvature for lateral, and that in such a recourse to muscular exercise is an unmitigated harm. To extension is meted strong condemnation on grounds of mechanism and safety. If applied from the head, the upper cervical region being the weakest point in the spinal column, traction sufficiently powerful to influence the curves would be much more likely to be productive of mischief there than to correct deformity elsewhere. Even granting the possibility of obtaining a good vantage ground for the application of traction, the author asks us to take a piece of wire bent to represent the spine, and to pull at each end with pincers. The difficulty is much greater than where pressure is put directly upon the curves. With this statement there should be no dissension, and it applies with even more force to cases of joint deformities where extension is substituted for posterior fixation.

In cases of commencing deformity the author recommends (*a*) freedom from exercise, (*b*) avoidance of fatigue, (*c*) the prone position for rest on a properly constructed couch, (*d*) the avoidance of heavy instruments and jackets, (*e*) the counteraction of the curves by keeping the spine from falling into bad positions.

An interesting chapter is given on incurvation and lordosis. It may occur in any portion of the spine, but generally it represents an exaggeration of the lumbar curve. It is nearly always acquired and arises from (1) tilting of the pelvis in rickets, (2) as an effect of congenital dislocation at hips, (3) as a compensatory curve in caries of the vertebræ, (4) from spondylolithesis, (5) from paralysis of the abdominal muscles, (6) from anchylosis of the hip, (7) from contraction of psoas, &c., (8) from talipes equinus, (9) from carrying heavy weights, abdominal tumours, &c.

In cases of congenital dislocation, Mr. Smith recommends equalising the length of limbs where only one hip-joint is involved. In treating lordosis due to old hip-disease, we are of opinion that the author would obtain excellent results by the application of a posterior hip-splint. It is not necessary to wait until the patient goes about, as the period of reclination is the most suitable for reducing deformity.

We are sorry that space will not permit us to enter more fully into a review of this work. It is a very complete and critical handbook of the subject upon which it treats. The author differs from Bernard Roth almost from the first page to the last, and the scope of the works is quite different.

Roth's book is a record of his own views and methods, while Smith's is a survey of the whole field of literature appertaining to the subject. A close comparison, therefore, is out of place. Our author seems to estimate the severity of the case by the extent of curve, while Roth, we think with more accuracy, is guided by the results of thoracic changes as evidenced by his metal tape. Many very severe curves are not accompanied by the grave extent of chest deformities which sometimes go with much lesser ones. In another edition we should be glad to find an explicit code of exercises appertaining to curvatures set before us, for whatever may be urged against indiscriminate muscular exercise, we cannot lay too much stress upon the scientific application of movements which should be the basis of all treatment in lateral curvatures. ROBERT JONES.

NOTES ON BOOKS.

ARTICLE 1868.

Die Sterblichkeitsverhältnisse in den Krankenpflegeorden (*The Relative Mortality among the Nursing Classes*). By DR. GEORG CORNET (Berlin, Reichenhall). *Zeitschrift für Hygiene*, 6ter Band, 1889.

THE recent investigations made by Dr. Cornet into the important question of the diffusion of the tubercle-bacillus in hospitals and other places occupied by phthisical persons have been followed up by a further inquiry into the common causes of death amongst those who spend a great portion of their lives in attendance upon the sick. The field of investigation is large, ranging over as many as 11,048 female nurses and 3,162 male attendants. After commenting upon the influence which their religious duties bring to bear upon their life and other matters more or less affecting the reading of his statistics, he calls attention to the fact that a very large proportion of the deaths in institutions and societies for tending the sick are to be traced to tubercular disease. That so few instances can be cited where tubercular disease has apparently been acquired from any known source, he explains by the fact that tubercle is of very slow growth, and that long before any signs or symptoms of specific disease have time to show themselves the history of such possible infection has been forgotten. Without following out the voluminous statistical tables in detail, it may be roughly stated that they tend to prove that the relative mortality is exceptionally high in the nursing classes, that the most fatal period of life is that between 20 and 50, and that this high rate at the comparatively early age is due to tubercular disease. He makes the startling assertion that of every 100 deaths among female nurses, 63 have been the victims of tuberculosis. The tables further go to show that this mortality reaches its highest point among those who begin to suffer during the first three years, and that a gradual diminution follows during the next twenty years, after which the relative frequency of tubercle is not remarkable. Looking at the phthisical sputum as the direct means by which the tubercle-bacillus gains access to the air, and so by inhalation to the lungs, Dr. Cornet points to the class of nurses whose duty it is to remove and clean the soiled linen or to make the beds as those most likely to become tuberculous. The average nurse of 33 years of age may thus be said to have the same expectation of life as a person unconnected with nursing duties who has already reached the age of 62. To lengthen the life of the nurse it becomes a duty to destroy or disinfect the sputum in every case of phthisis.

E. CLIFFORD BEALE, M.B.

ARTICLE 1869.

Reports of the Statistical Committee, and of the Medical Superintendents of the Metropolitan Asylums Board for the year 1888.

EXCEPTING a very interesting report of the training-ship *Exmouth*, these deal exclusively with infectious diseases and imbeciles. Of the former there were but 69 cases of small-pox, in 56 of which some cicatrices gave evidence of previous vaccination; of the 8 fatal cases, 4 belong to these and 4 to the remaining 13. There were 99 cases of diphtheria, 46 of which were fatal, but this disease was not admitted until October, so that no conclusions can be drawn as to its seasonal waves, or comparisons made with previous years. One case only of typhus was received, which with two remaining from 1887 recovered.

The admissions of scarlatina numbered 4,408, or 88 per cent. of the total; together with those carried over from the previous year, 6,458 cases were treated, with a mortality of 9·89 per cent. The admissions of enteric fever numbered 450, the total cases treated 585, and the mortality 14·64 per cent.

Forty-seven nurses or other servants of the Board contracted infectious diseases in the hospitals, including 20 cases of scarlatina, 11 of enteric, and 6 of diphtheria. Two of the enteric cases ended fatally.

Scarlatina showed the usual autumnal rise, though the actual number of cases in hospital was greatest in January in consequence of the unprecedented epidemic of the previous year. The committee notice the excess of females over males between the ages of 20 and 35, which is, we would suggest, to be explained by the greater exposure of young women, especially mothers, to infection in attendance on children suffering from this disease. The mortality was highest, 21·81 per cent., under 5 years, sank in the subsequent quinquennia from 8·36 to 3·87 between 20 and 25 years, and gradually rising again to 8·39 between 35 and 40. After this the materials are small, but of the four cases occurring after 55 years, two were fatal.

Enteric fever exhibited the same autumnal wave as scarlatina, and, like it, was more fatal to children under 5 than to those between 5 and 10; but from this minimum mortality of 8 per cent. there is a steady rise until after 50 the death-rate amounts to 50 per cent.

The committee have prepared maps of London showing the hospitals, thoroughfares, and the outlines of the unions; which will be spotted daily at the ambulance stations with the number of cases of each disease transported to the hospitals.

ARTICLE 1870.

Index Bibliographicus Syphilidologiæ. Bearbeitet von DR. KARL SZADEK. Voss, Hamburg and Leipsic. 1889. Pp. 71.

UNDER this rather formidable title, Dr. Szadek, of Kiew (Russia), has for the second time collected a list of the titles of books and papers on venereal diseases published during a whole year. The first number was published last year, and contained references to the literature of 1886. The present deals with that of 1887, and will be found of great assistance by those who wish to find out what was written on syphilography during that year.

ARTHUR COOPER.

ARTICLE 1871.

Defects in Plumbing and Drainage Work. Described by FRANCIS VACHER. John Heywood, 1 Paternoster Buildings.

IN this little work Mr. Vacher has collected more than a hundred examples of sanitary defects, discovered either by himself or by his correspondents, and each of them carefully illustrated with a clear diagram.

It certainly is astonishing to realise the length, breadth, and depth of ignorance and mean economy displayed by the jerry-builder and his plumbing friends.

A perusal of this book should interest all, and its possession by every lay householder is much to be desired, as it would show him what blunders to expect, and how to detect them.

The examples are divided into groups, which the author admits to be 'an arbitrary and unscientific arrangement,' and each of these divisions is prefaced with a few remarks by Mr. Vacher, which we cannot always agree with; but of the collection of illustrated examples of defects, which are the *raison d'être* of the work, we can only speak in terms of praise. The book, like many others, has but a limited aim, but, unlike the majority of such ventures, it hits the mark.

ARTICLE 1872.

The Journal of Laryngology and Rhinology. Edited by SIR M. MACKENZIE and DR. R. N. WOLFENDEN. June 1889. London: Anderson & Co.

THE number of this journal for June opens with an article on the treatment of the so-called phthisis of the larynx, being an instalment of a paper by Dr. John Sedziak of Warsaw. Dr. Silk contributes a short paper on the position and methods of anæsthetisation in naso-pharyngeal operations, which is really an addendum to his previous article on the choice of anæsthetics in these cases. The usual abstracts and one review complete the number.

ARTICLE 1873.

Transactions of the Obstetrical Society for the Year 1889. Part I., January and February.

AN interesting case of mylacephalous acardiac twin was brought forward by H. E. Tristrail, M.R.C.P., and dissected by Alban Doran. Methods of craniotomy are ably discussed by Dr. Archibald Donald, and preference is given to the operation on the after-coming head. The advantages are as follows:—

1. The base of the skull is effectually broken up.
2. The head is well fixed during perforation and crushing.
3. The position of the head is easily altered.
4. The collapse and moulding of the head is often readily brought about by combined traction on the jaw and body of the child, and suprapubic pressure.

Dr. Galabin describes a case of Porro's operation performed with success. Sexual feeling was retained two years after the operation.

J. INGLIS PARSONS, M.D.

ARTICLE 1874.

Notes on some Cases treated by Apostoli's Method. By F. E. HARE, M.B. *Australasian Medical Gazette.*

THE author describes a very interesting case of metrorrhagia in a woman aged 45. Curetting, nitric acid, and all other means were tried to check the hæmorrhage, without avail. After ten applications with the positive pole, and a strength of 75 to 165 milliampères, it all ceased; the patient became regular.

The author on many occasions has placed the external pole on the back, and finds that it relieves sacral pain better than when placed on the abdomen.

J. INGLIS PARSONS, M.D.

ARTICLE 1875.

The Treatment of some Forms of Uterine Diseases by Electrolysis. By S. BYRNE, A.B., M.B. *Australasian Medical Gazette.*

FOUR cases are described by the author. His conclusions are that very little decrease in the size of fibroids takes place after the applications, but that in most cases the hæmorrhage is checked, if not stopped. This result, he finds, is in many cases better obtained by the use of the negative pole. This is a direct contradiction to Apostoli, who considers the negative pole more likely to induce hæmorrhage than to stop it. A practical point observed by the author is, that the intensity of current, which a given patient is able to bear, will depend in a great measure on the amount of surface exposed on the internal electrode.

J. INGLIS PARSONS, M.D.

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MESSRS. BURROUGHS, WELLCOME, & Co.'s NEW PREPARATIONS.

Compressed Comp. Sulphur Tabloids.

Messrs. Burroughs, Wellcome, & Co. have been well advised in manufacturing compressed Comp. Sulphur Tabloids, of which they have sent us samples. The value of a combination of precipitated sulphur and bitartrate of potassium in hæmorrhoidal affections, in chronic rheumatism, and in various skin affections, especially when allied to the gouty diathesis, is well known, and the tabloids, here as elsewhere, afford a convenient method of exhibiting the combination. Each tabloid contains five grains of sulphur and one of the bitartrate. It is advisable to crush the tabloids between the teeth before swallowing, to ensure their breaking down, but the taste is not disagreeable, the bitartrate giving a refreshing acidity to the otherwise tasteless sulphur.

Lanoline Ointment.

The Lanoline Ointment, which has been submitted to us by the same enterprising firm, is a mixture of lanoline with paraffin oil. Pure lanoline is too tenacious and viscid to make a good ointment base, but the difficulty has been overcome by the admixture with paraffin oil. The result is a yellowish-white, homogeneous mass of suitable consistency, well adapted for general use as an ointment base when it is desired to combine the peculiar properties and effects of lanoline with some medicinal substance or substances. It rubs down quite smooth, and materially aids in obtaining the local and constitutional effects of drugs applied to the skin. Used alone it is a bland, soothing application, equally suited for preserving the skin in good condition, as for remedying and removing roughness and excoriation of the skin. Lanoline itself does not readily undergo decomposition, and the mixture is absolutely unchangeable under any circumstances.

Tincture of Strophanthus.

We have also received a selection of preparations in connection with which the name of Messrs. Burroughs, Wellcome, & Co. is well known. Their tincture of strophanthus is now made of the strength of 1 in 20, and the dose is 2 to 10 minims. This strength is, in our opinion, preferable to the stronger tincture first manufactured by them, the physiological activity of which was somewhat too marked.

Fluid Extract of Podophyllum.

The fluid Extract of Podophyllum, one pound of which is equal to a pound of the standard drug, is a very convenient form of administering this very useful substance. The dose is from 20 minims to ʒj, and it does not precipitate when mixed with water. Mixed with equal parts of aromatic spirits of ammonia, it makes the tinct. podoph. ammoniata.

Hypodermic Tabloids.

We also received several specimens of their hypodermic tabloids—of hyoscyamine, for use in the restlessness and insomnia incidental to many forms of insanity; apomorphine, a prompt and efficient emetic, peculiarly valuable because it can be given without coaxing or bullying the patient into swallowing it, and because its action is more rapid than that of any other emetic, &c.

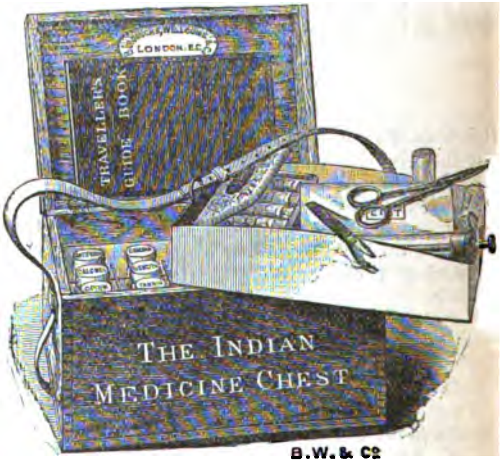
Sulphonal.

We have tried their sulphonal tabloids in several cases of insomnia due to cardiac or cerebral disease, and always with the most satisfactory results. One advantage attending the use of this new hypnotic is that tolerance is not readily established, and the dose does not require to be increased as with most other drugs of this class. Its only drawback is the relatively large dose (20 to 40 grains) required to induce a sleep of several hours' duration.

MESSRS. BURROUGHS, WELLCOME, & Co.'s NEW INDIAN MEDICINE CHEST.

This chest is made of seasoned teak-wood, dovetailed and screwed together, very light and portable, is fitted with a strap for convenience of carrying; when filled with Compressed 'Tabloids' of medicines, minor surgical appliances, &c., it weighs under eleven pounds. The following is a list of contents of this very complete case:—Antipyrin 5 grs., Aconite Tincture 1 ♏., Bismuth Subnit. 5 grs., Cascara Euonymin and Nux, Calomel and Piperin, Cathartic Comp., Livingstone's Rousers—Tonic and Aperient, Ipecac. Pdr. 5 grs., Ipecac. Co. 5 grs., Morphia 1-20 gr., Voice 'Tabloids' (Cocaine Chlor. Pot. and Borax), Potass. Bromide 5 grs., Potass. Nitras. 5 grs., Peptonic 'Tabloids,' Quinine (Soluble) 5 grs., Tonic Compound, Soda Mint., Soda Salicylate, Warburg Tincture 1-2 drachm. No. 10 Case fitted with 5 × 2 drachm bottles, filled as follows:—Potass. Permanganate 2 grs. (2), Carbolic Acid (2), Iodoform Pdr., 2 oz. Chlorodyne, Lancet, Needles, Silk, Ligature, Caustic, Oiled Silk, Lint, Bandages, Rubber Plaister, Catheter, Syringe, 'Travellers' Surgical and Medical Guide.'

If the case is required for a medical man a hypodermic pocket-case may be added, containing either six or twelve tubes of 'tabloids' for subcutaneous injection. The superiority of the 'tabloid' form for hypodermic medication is well known, while solutions of alkaloids rapidly decompose; the 'tabloids' are unaffected by age or climate.



This medicine chest has now been supplied to travellers, missionaries, and others in all parts of the globe. The tabloid form is especially adapted for travellers. They occupy about a third of the space required for ordinary medicinal preparations. No scales or weights are required, and, being unmixed with an excipient, they do not deteriorate through age or climate. Those tabloids intended for local effect upon the tongue and pharynx are compressed firmly, and, while slowly dissolving in the mouth, act as a continuous gargle. The others are compressed lightly, and quickly disintegrate in the stomach.

Tabloids were used for fitting out Mr. H. M. Stanley, and in his book, *The Congo Free State*, he says, 'Obtain your medicine pure and well prepared. Messrs. Burroughs & Wellcome will equip you with tropic medicines in chests and cases, with supplies to last you one month or ten years. I have informed them of a few diseases such as have fallen under my notice, and they have prepared such medicines as have been tried during the last seventeen years of my African experiences.

'Your best tonic would be 2 grains of quinine as compressed tablets by Burroughs, Wellcome & Co. If marching, drop a compressed tablet of acidulous powder (Thirst tabloid) in your cup of water.'

The East African Expedition and other colonising companies were also fitted out completely with tabloids of compressed drugs. They are also especially adapted for missionaries; each tabloid containing a specified quantity, an accuracy of dose hitherto impossible is ensured.

CORRESPONDENCE.

My attention has just been called to an article in your issue of May 20, 1889, in which Dr. C. D. Scudder, of New York, claims the invention of a knot-tier for ligaturing in cavities. I beg respectfully to inform you, and through you, Sir, the medical world, that such an one I devised and made some nine months back, the principle and usage being exactly the same, in nowise differing save very slightly in shape and in material used. The same was at that time submitted to and approved by Mr. W. Johnson Walsham, F.R.C.S., Staff-Surgeon, &c., St. Bartholomew's Hospital, and used satisfactorily on a case of his (polypus of the uvula) in the 'out-patients' of the hospital; moreover, I have shown and explained it to many medical friends at the said hospital and elsewhere. Of course, I do not imagine that Dr. Scudder has heard of my instrument and given it to the world as his own; it is doubtless one of those instances in which the same idea offers itself to two minds independently, but I claim that in point of time I have precedence, and perhaps we might regret that, from a patriotic point of view, it did not occur to me to publish what I truly conceived, and what in certain cases cannot fail to be, of especial value.—I remain, yours respectfully, C. Campbell Harris.

21 Craven Road, Hyde Park, June 15, 1889.

PATENTS.

[*This list is specially compiled for the* London Medical Recorder by Messrs. Rayner & Cassell, *Patent Agents of* 37 *Chancery Lane, London, W.C., from whom all information relating to Patents may be had gratuitously.*]

7530. Utilising sulphocyanide of iron as a medicinal drug in lieu of the usual ferruginous tonics (also the use of any alkaline sulphocyanide as a medicinal drug). Godfrey Bamberg, 7 Holly Village, Highgate, May 6.

7554. Improved process for extracting the oil from the livers of cod and other fish. Alfred Julius Boult, 323 High Holborn, Middlesex (Joseph Lafage, France), May 6.

7721. An improved tracheal tube. Robert Henry Clarke, 21 Finsbury Pavement, May 8.

7814. The lady's abdominal belt. Kate Wood and Charles James Wood, 314 Harrow Road, Paddington, May 10.

8105. An artificial hand. Oliver Imray, 28 Southampton Buildings, Chancery Lane, London (Edward Gregor Smith and William Roscoe Adams, France), May 15.

8,267. Improvements in crutches. Ernest Augustus Barber Beaumont, 115 Cannon Street, London, May 18.

8,540. Improvements in artificial hands or feet. Alfred Daniells, 6 Lord Street, Liverpool, May 22.

8,556. Improvements in apparatus for producing hot-air for inhalation. Robert Macdonald, 52 Chancery Lane, London, May 23.

8,618. Improvements in vaporising apparatus for medical purposes. Herbert Franklin Williams, 45 Southampton Buildings, London, May 23.

8,814. Improvements in or relating to truss pads. Alfred Julius Boult, 323 High Holborn, Middlesex. (John C. Rorick, United States.) May 28.

8881. Improvement in knitting machines, surgical elastic work. Arthur Frederick Longdon, 24 Southampton Buildings, London, May 28.

Specifications Published.

6,779. Mucklow. Sanitary towel. 1888. 6*d.*

4,470. Merriman. Eye-glasses. 1889. 6*d.*

5,230. De Vars. Producing ozone. 1889. 6*d.*

9,551. Boult (Hennig). Medicine bottles, &c. 1888. 8*d.*

16,043. Warbrick. Suspenders. 1888 8*d.*

The above specifications published may be had of Messrs. Rayner & Cassell, Patent Agents, Chancery Lane, London, W.C., at the prices quoted.

MISCELLANY.

Milkmaid's Cramp.—Dr. Remak was recently enabled to bring a case of true milkmaid's cramp before the Medical Society of Berlin. The malady was originally described and classified by Basedow. It is a form of muscular inco-ordination analogous to that of writers, ironers, and cigarette makers, and involves principally the median and superficial radial nerves. In Dr. Remak's case both hands were affected with spasmodic contractions on attempting any kind of movement, but particularly that of prehension. The patient had for some weeks been obliged to milk uninterruptedly for several hours daily, and is now quite incapacitated from following her occupation. As a general rule the symptoms in these cases take a much longer time to develop.

Deaf Mutes in America.—Professor A. Graham Bell, of Washington, calls attention to the enormous increase of deaf mutes in the United States. In 1870 there were 10,000. Ten years later there were 34,000. This increase he declares to be largely due to the mistaken course of people interested in the welfare of such unfortunates. A strong hereditary tendency to transmit defects of hearing from one generation to another undoubtedly exists. With deafness go other afflictions besides ignorance of speech. The ratio of the blind among deaf mutes is fourteen and a half times as great as among the whole population; that of idiots is forty-three times as great. 'Philanthropy in this country,' says Professor Bell, 'is doing everything possible to encourage marriage among deaf mutes. We educate them together, teach them a language of their own—so they know nothing of English. We send them out into the world, and they naturally prefer the company of each other. This is not the system of management in Europe, and unless it is changed we shall certainly have a deaf variety of the human race.'

A Novel Question as to Anæsthetics.—A curious point, which has some practical interest for medical men, has recently been decided by a French law court. A workman, who, in passing the Church of St. Eustache, had been injured by a stone which fell from the building, brought an action for damages against the City of Paris and the Church authorities. He alleged that the accident had caused paralysis of his right arm, consecutive to fracture of the clavicle. Three doctors were ordered by the Court to examine him. In order to exclude the possibility of malingering, these gentlemen proposed to conduct their examination under chloroform. The man refused to submit to this, and pleaded that he should not be compelled to undergo a proceeding which might possibly cause his death. His counsel argued that though it might be legal to anæsthetise against his will a person accused of a criminal offence, it would be unjust to apply the same rule to a man seeking compensation for an injury he had suffered. The Court decided that whilst the medical men had the right to make whatever examination they considered necessary in the interests of justice, the plaintiff could not be compelled to submit to a test which, rightly or wrongly, he believed to be dangerous to his life or health.

Completion of a Great Work.—The *Dictionnaire Encyclopédique des Sciences Médicales*, edited partly by Dr. A. Dechambre, and after him by Dr. L. Lereboullet, has lately been brought to a successful close. The first volume appeared on June 24, 1864; the last on April 20, 1889. The work consists of 100 volumes, and is an exhaustive summary of the whole cycle of the medical sciences. One drawback, inseparable from so gigantic an undertaking, is that the early volumes are in many points hopelessly out of date long before the work has reached its conclusion. One feature of Dechambre's Dictionary, however, for which students of medical literature must always be grateful, and which can never become obsolete, is the fulness of the bibliographies appended to all the more important articles.

Shorthand for Medical Men.—A movement is on foot, which has received the approval of many of the foremost men in the profession in this country, to promote the acquisition of shorthand by medical students, with the view of enabling them to take more accurate notes of lectures, clinical observations, &c. It is argued that shorthand would also be of great use to physicians for keeping notes of cases, writing professional letters, &c. Examinations are to be held in the subject before the student enters on the medical curriculum, and prizes will be given to the most proficient. The promoters of the scheme do not seem altogether to realise that stenography is an art which cannot be acquired by every one, any more than piano-playing or any similar accomplishment. The inherent fallacy in all such schemes is that a standard of proficiency is assumed to be within reach of the multitude which is only attainable by the few. Unless shorthand can be mastered so as to become automatic, it is worse than useless for men who have to observe and record matters which tax their intellectual powers to the full, without the added incumbrance of having to think how they are to write them down. Besides, no existing system of phonography is adequate for the representation of medical terminology, and new symbols will have to be devised for the purpose.

Medical Study at Oxford.—From a report recently issued, it appears that during 1888 37 students attended the various courses in physiology, 18 of whom were working for honours, while the remainder were preparing for the preliminary honours school, or for medicine. The Botanical Gardens have been rearranged according to the system of Bentham and Hooker, and a portion of the gardens has been set apart for medicinal plants. During the year the numbers of students of botany rose from 10 to 23. An average number of 20 students worked regularly in the department of Human Anatomy. Owing to lack of funds this department possesses only temporary quarters of wood, roofed with galvanised iron. Through this in winter rain and snow penetrate, whilst in summer the heat is intense. In the department of Chemistry the number of regular students was 105, in addition to others who attended particular courses. The list of lectures and demonstrations in this department gives a high idea of the activity of the teachers.

Operative Surgery at the Present Day.—Dr. David W. Cheever, the well-known Boston surgeon, in a lecture delivered at Washington May 14 gives the following classified list of 'modern and justifiable operations, as distinguished from those barely justifiable':—1. *To remove growths or foreign bodies from the cavities of the body*: Opening the brain; opening the spinal cord; displacement of the upper jaw or of the nose for nasopharyngeal polypi; cutting into the pharynx from outside the neck to remove tumours of the tonsil; œsophagotomy for foreign bodies; opening the gall-bladder for the removal of stones; opening the pelvis of the kidney for calculi; suprapubic cystotomy for calculi and tumours of the bladder; ovariotomy; removal of the diseased uterus or its appendages; laparotomy for gun-shot wounds or for extra-uterine fœtation; excision of the lower part of the rectum for growths. 2. *To reach and evacuate inflammatory products*: Opening the chest and resecting the ribs for empyema; opening the abdomen for appendicitis, or for chronic peritonitis; opening and drainage of pelvic abscesses; of abscess of the vertebræ: opening of deep abscess of the neck; evacuation and draining abscesses of joints; perinephritic abscess and removal of one kidney. 3. *To relieve obstruction*: Intubation and tracheotomy; gastrotomy and enterostomy; colotomy; perineal section; herniotomy. 4. *To restore continuity*: Resection and suture of bowel; resection and union of bone; resection and reunion of nerves; nerve grafting; reunion of tendons and muscles. 5. *Unclassified procedures*: Plastic and osteoplastic surgery; modifications of orthopædics, including bone sections and excisions; litholapaxy; reduction of dislocation of the hip and of the shoulder by applied anatomy; endoscopy; rhinoscopy and removal of turbinated outgrowths; removal of adenoids; aseptic wiring of fractures; local anæsthesia in setting fractures; closing of skull wounds by the insertion of buttons of bone. The following operations were declared by Dr. Cheever to be as yet *sub judice*, or on trial:—Resection of the pylorus; resection of cancerous intestine or omentum; removal of the spleen, of large bronchoceles, of the larynx, the pancreas, the prostate, the normal ovary; fixation of the kidney or uterus; puncture of the pericardium; opening gangrenous abscesses in the lung; tapping the ventricles of the brain.

Literary Intelligence.—A second edition of Dr. Antonio Longhi's Italian translation of Mr. Erichsen's *Science and Art of Surgery* has recently been published by Vallardi, of Milan.

The twentieth edition of Hyrtl's *Lehrbuch der Anatomie des Menschen* was recently published by Braumüller, of Vienna. The first edition appeared forty-two years ago.

A Cyclopædia of Diseases of Children is now in course of publication by Messrs. J. B. Lippincott & Co., of Philadelphia. The work, which is in three volumes, of about 1,000 pages each, is edited by Dr. J. M. Keating. Among the English contributors are Drs. Angel Money, T. Barlow, Goodhart, Cheadle, Sansom, Mitchell Bruce, W. H. Allchin, A. Collie, Mr. Henry Morris and Sir Morell Mackenzie; Drs. Judson S. Bury and H. Ashby, of Manchester; Dr. T. M. Dolan, of Halifax; Drs. Macewen and J. Finlayson, of Glasgow. Miss Catherine Wood contributes notes on the Nursing of Sick Children; and the late Dr. Milner Fothergill, shortly before his death, sent in an article on Gout and the Urinary Diatheses (Oxaluria, Phosphaturia, Lithuria). The first volume has recently appeared.

The London Medical Recorder.

Article 1876.

MONTHLY MIRROR OF MEDICAL SCIENCE.

Medicine.

Renal complications in whooping-cough.

Some time ago Dr. Stefano Mircoli pointed out[*] that he had several times observed renal complications in whooping-cough. Thus, on one occasion, among ten children suffering from the disease, nephritis occurred in two cases, one of which died. The necropsy left no doubt as to the existence of the renal affection. During another outbreak, among thirty-five cases nephritis developed in four. Two of these died, and in one a *post mortem* examination was made. The kidneys were examined microscopically, and were seen to be in a condition of severe parenchymatous nephritis. No micro-organisms could be seen. Recently[†] Dr. Mircoli has brought forward additional evidence on the subject. In a recent epidemic at Monterubbiano, of twenty-four patients, three died, one from suppression of urine, another from suffocation in a paroxysm of coughing, and a third from marasmus. In the two latter cases, although during life there were no symptoms of renal affection, on *post mortem* examination venous stasis in the kidneys with commencing albuminuria was found. There was also a considerable amount of hæmorrhagic infiltration. Cultures of the kidney-tissues gave negative results. Dr. Mircoli believes that the renal affection is due to venous stasis caused by obstruction of the vena cava through the violent paroxysms of coughing. According to him the kidney is affected, in whooping-cough, in 12 per cent. of cases occurring in children.

Acute Bromidism.

At a meeting of the Società Medico-Chirurgica of Bologna, on June 8, Dr. Beorchia Nigris gave an account of some experiments which he had made on dogs and rats with the bromides of potassium and sodium. He made twelve series of experiments lasting in different cases from three to fifty days. Varying doses of the drug were given in the food, or dissolved in milk, the highest being 1 gramme per kilogramme of bodyweight, the medium ones ranging from 30 to 40 centigrammes, and the smallest from 10 to 20 centigrammes. Dr. Nigris divides the results into two categories. In one, large doses caused coma, which gradually passed into general paralysis; in the other, paralysis came on at once. Dissection showed this to be due to cerebro-spinal hæmorrhage; in several cases diffused subarachnoidal hæmorrhage was also noticed. In young animals the most common lesion was infiltration of the medullary sheaths with leucocytes, particularly in the medulla oblongata and the pons. The hæmorrhages, which were found in some cases as early as the second day of experimentation, are probably due to the direct action of liberated bromine on the vascular walls. There was diminution of the number of red corpuscles of the blood, and in the later stages, commencing fatty degeneration of the heart. In the stomach there were degenerative changes, and in some cases hæmorrhages in the mucous membrane. In the kidneys there were hæmorrhages in the older animals, and cloudy swelling, and occasionally fatty degeneration in the younger ones. These lesions were observed even in animals to which only 15 to 20 centigrammes per kilo were administered. The urinary secretion first diminishes, then becomes unnaturally copious. Older animals are much more subject to hæmorrhage than younger ones, a circumstance which Dr. Nigris attributes to the less sound condition of their blood-vessels. Therapeutic doses produce no appreciable lesions of the nervous system; the poisonous effect of the bromides (in large doses) on man are probably due to the action of the salts on the walls of blood-vessels. Diminution in the amount of urine excreted is an indication that the drug should be discontinued.

The tendon reflexes in leprosy.

At a meeting of the Sei-i-Kwai (Society for the Advancement of Medical Science in Japan),[*] Dr. S. M. Suzuki presented a communication in which he stated that, as the nervous system was so deeply affected in leprosy, he had expected to find that the tendon reflexes would be diminished or abolished in that disease. On the contrary, however, he found it increased. He exhibited a table of seventeen cases of undoubted leprosy, anæsthetic, tubercular, and mixed, in sixteen of which the tendon reflexes were markedly increased. The duration of the disease in these cases ranged from nine months to fourteen years. Dr. Suzuki points out that in multiple neuritis the tendon reflex is abolished, whereas in leprosy no changes are found such as are present in lateral and disseminated sclerosis, in which the tendon reflexes are exaggerated. From this he argues that in leprosy there must be still undiscovered lesions in the nervous system besides those of multiple neuritis.

Surgery.

Splenectomy.

A successful case of splenectomy for enlargement and displacement of the organ is reported by Sir Spencer Wells.[†] The patient was a young married woman, aged 21, who had suffered from ague when a child. Soon after her marriage, an abdominal tumour which she had had for several years began to enlarge, and was thought to be connected with the left ovary. It continued to increase in size till it lay in front of the uterus, extending from the pubes to the umbilicus, and measuring nine inches transversely. Sir Spencer Wells diagnosed it to be an enlarged displaced spleen. After an attack of peritonitis, which was judged to be due to hæmorrhage into the spleen substance, the tumour was aspirated, ten pints of thick reddish-brown fluid being drawn off. Microscopically this was found to contain mainly broken-down red blood-corpuscles and numerous leucocytes. As the fluid quickly re-accumulated, and the patient's condition became critical, Sir Spencer removed the tumour on May 13, 1888. During the operation the cyst-wall ruptured, and a large quantity of fluid, similar to that withdrawn by aspiration, rushed out. The solid part of the tumour, consisting of hypertrophied spleen-tissue, weighed four pounds. There were extensive adhesions to intestines, uterus, &c. One part in front was so firmly adherent that it was decided to leave a portion of the cyst-wall, measuring three to four inches from above downwards, two to three from side to side, and a quarter of an inch in thickness. Sir Spencer Wells decided not to drain, and after securing the splenic vessels with silk ligature stitched up the wound with fine silk, including sac wall, peritoneum, and integument. The operation, which lasted fifty minutes, was performed under carbolic spray, and the wound was dressed antiseptically; scarcely any blood was lost from the splenic pulp, but the patient was much exhausted after the operation. The wound had to be partly reopened a week later to give exit to pent-up discharge. The pus-forming cavity did not communicate with the peritoneum. Strict antiseptic precautions were employed and the sac gradually contracted into a sinus. On July 22 she was perfectly well and only a small superficial sore remained. A year after the operation she continued well, and could exert herself in any way as well as ever. The abdominal cicatrix was firm and nothing abnormal could be discovered either in the abdomen or the pelvis. A report by Dr. Dreschfeld on the blood, dated June 21, 1889, more than a year after the operation, states that on microscopical examination it appeared perfectly normal. The red corpuscles were of normal size and appearance; the leucocytes were of normal size and were present in normal proportion. The quantity of hæmoglobin was between 75 and 80 per cent.

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[*] *Gazzetta degli Ospitali*, Jan. 13, 1889.
[†] *Ibid.*, June 30, 1889.

[*] *Sei-i-Kwai Med. Jour.*, May 1889.
[†] *British Medical Journal*, July 13.

A new method of exploring the brain.

Dr. E. Souchon, of New Orleans, has recently suggested * a method of exploring the brain without previous trephining. A small incision is made in the scalp down to the bone. Through this, the bit of a watchmaker's drill is introduced, and on reaching the bone is held firmly pressed against it; the sliding knot of the instrument is then worked at first slowly, then quickly, then slowly again as the bit penetrates the bone and comes near the brain-substance. The bit is provided with a movable gauge and screw which is adjusted so as to prevent the bit from penetrating too deeply into the brain-tissue. As soon as the skull is penetrated the drill is withdrawn and a hypodermic needle larger than the ordinary size with syringe introduced. The method was tried on two dogs, in whose skulls holes were bored in six places without any untoward result. The animals were afterwards killed, and no injury was found to have been done to the brain beyond a very slight superficial hæmorrhage.

Precancerous conditions of the bladder and œsophagus.

One of the most decided advances in clinical and pathological study at present is the growing recognition of prolonged irritation as a powerful factor in the etiology of cancer. Our knowledge on this subject is still only in its infancy; as it extends it may possibly lead to a means of preventing the development of the disease or, at least, of strangling it in its cradle. Paget's disease of the nipple and leucoplakia, or leucoma of the tongue, cheek, and prepuce, are at present the only two distinctly acknowledged precursors of malignant disease, but Mr. Hurry Fenwick,† and Dr. Hack, of Vienna, have recently brought forward evidence showing that analogous conditions exist in the bladder and œsophagus. Mr. Fenwick states that out of twenty-five cases of vesical growth which have been under his observation during the last eighteen months, since the introduction of the incandescent lamp cystoscope, two cases which he repeatedly but vainly examined for vesical tumour awoke in his mind suspicions as to the probability of a precancerous stage existing. In both, cancer subsequently developed. In three other cases presenting symptoms of growth, but in which no tumour could be discovered, the condition of the mucous membrane has induced him to give a guarded prognosis. In nearly all these cases a certain amount of residual urine (not of prostatic origin) was present, and there was painless profuse hæmaturia. The mucous membrane over the posterior wall behind the inter-ureteral bar was blurred, lumpy, and gelatinous. This is the situation in which cancer most frequently commences, and Mr. Fenwick believes that the irritation of residual urine is sometimes a causative factor in its production. With regard to the œsophagus, Dr. Hack, at a recent meeting of the Imperial-Royal Medical Society of Vienna, showed a man, aged 31, who had suffered from symptoms of œsophageal stenosis for five months. A stricture was found 36 centimètres from the teeth, close to the cardiac orifice. The man's age seemed to exclude the possibility of cancer, but on examining the interior of the gullet with an œsophagoscope the mucous membrane at the affected spot had not its natural rosy colour, but a whitish appearance, resembling leukoplakial patches on the tongue and cheek. There was an ulcerated surface, bleeding easily, and covered with little excrescences. A small fragment of one of these was extracted and pronounced to have the structure of epithelial cancer.

A suggestion for the treatment of cancer.

A medical man who, apparently 'frightened with the noise himself has made,' only signs with the initials 'J. M. G.',* makes a suggestion which may possibly prove of some value. Part of the ill success which has attended all attempts to cure cancer is certainly due to the half-hearted way in which they have been carried out. The want of faith has made medical men too prone to look on cases of malignant disease from a purely fatalistic point of view. Sir James Paget's golden advice to fight on to the last with every weapon at our disposal is founded not only on humanity but on strictly scientific principles. In cancer, above everything else, we should 'try all things'; thus only is there any hope of our finding something good that we can hold fast to. 'J. M. G.'s' idea is briefly to digest away the disease with papain. This is not particularly original, but he goes on to suggest that the vitality of the part should be systematically lowered at the same time, so as to give the solvent action of the papain full play. He accordingly asks the profession to make 'calm and unprejudiced trial' of the following formula:— ℞ Papain, gr. 3; thallin, gr. 2; glycerini tragacanthæ, q. s. ut fiat pilula. One pill is to be taken every third or fourth hour, and, if well tolerated, the dose is to be increased to two pills. If there seems to be need of a further increase, the pills are to be given singly every hour, as the thallin is not generally well borne in doses exceeding four grains. The proportion of papain to the thallin should never exceed that of three to two. For external use, the same proportion of the two drugs may be applied, either sprinkled on an open sore or gently inuncted with lanolin as a vehicle.

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* *New York Medical Record*, June 1.

† *Brit. Med. Jour.*, July 20.

* *Lancet*, June 29.

LARYNGOLOGY, &C.

Dr. Joal, of Mont Dore, has recently published * nine cases in which patients suffering from spasm of the œsophagus were entirely cured by the treatment of intranasal disease, of which they were also the subjects. He argues from this that the œsophageal spasm was caused and maintained by the irritation of the nasal affection. Œsophageal spasm is also set up by disease of the throat. In one case mentioned by Joal it was induced by the application of the cautery to adenoid masses at the base of the tongue. Dr. Joal denies the influence of hysteria in the production of œsophageal spasm, eight of his nine cases being men, and none of them showing the slightest sign of hysteria. Joal also points out that, although melancholia is a frequent concomitant of œsophageal spasm, there is no evidence that there is any causal relation between the two conditions, or that it is anything more than a coincidence.

ARTICLE 1877.

WELCH ON HYDROPHOBIA.

THE *Journal of the American Medical Association*, of May 18, 1889, publishes a paper by Wm. H. Welch, M.D., 'read in the Section on Anatomy, Physiology, and Pathology, of the Medical and Chirurgical Faculty of Medicine,' in which a fresh critical review is attempted of Pasteur's labours in general as regards hydrophobia. The following is an abbreviated report.

The results of *post-mortem* examinations made by Dr. Welch in three cases of hydrophobia in human beings were as follow:—In one case he had made serial sections of the medulla oblongata and pons from the second cervical nerve upwards. The lesions in this neighbourhood were small hæmorrhages, accumulations of leucocytes in large numbers in the peri-vascular lymph spaces and in scattered foci in the neuroglia and thrombi, composed of blood-plates and leucocytes in small blood-vessels. These lesions were for the most part microscopical and their extent and distribution could be determined only by the examination of a large number of sections from different parts. The lesions were especially well marked in and near the nuclei of origin of the spinal accessory, pneumogastric, and glosso-pharyngeal nerves, and in the motor nucleus of the trigeminus. Cases have been reported in which even more extensive lesions than those have been found, their severity depending apparently in large measure upon the duration of the disease. While it cannot be claimed that these lesions are peculiar to hydrophobia, or by themselves suffice for its anatomical diagnosis, it is incorrect to suppose that hydrophobia is a disease without demonstrable anatomical lesions which bear a manifest relation to the symptoms of the affection.

Although there is no reason to doubt that the infectious agent in the virus of rabies is a micro-organism, no actual demonstration of this organism has yet been made. From material obtained from a series of rabbits which were inoculated at the Pathological Laboratory of the Johns Hopkins University with hydrophobic virus obtained from the medulla oblongata of a man dead of the disease, efforts were made to demonstrate, both in the tissue and by means of cultures, some specific micro-organism, but with entirely negative result.

The virus of rabies is destroyed by a comparatively low temperature, exposure for one hour to a temperature of 50° C. [122° F.] sufficing for this purpose. It is killed in a short time by drying, certainly within four days when exposed in thin layers capable of rapid desiccation. It is destroyed by exposure to the direct rays of the sun, even when surrounded by conditions preventing much elevation of temperature. According to Babes, the virus is more resistant to the action of corrosive sublimate and carbolic acid than most micro-organisms, but it usually loses its infectious properties after exposure for three hours to the action of 0·1 per cent. sublimate, or of 1 per cent. carbolised solution. Galtier has pointed out the important fact that the virus of rabies may be demonstrated after forty-four days, and perhaps longer, in the cadavers of buried animals. A practical means of preserving the virus is to place the brain or cord of the infected animal in pure glycerine, which may be diluted with water, and should be occasionally changed.

It has been ascertained that the occurrence of infection with rabies depends largely upon the part of the body and the character of the tissues into which the virus is inoculated. The disease always develops after inoculation of the virus into the brain or upon its surface, or into the eye, the period of inoculation being shorter and more definite after subdural inoculations. Inoculations into the substance of nerve-trunks appears to be equally successful in rabbits, but somewhat less certain in dogs, although even with the latter inoculation into the pneumogastric nerves does not fail. Intravenous injection does not produce the disease in the ruminants unless very large quantities are used, and may fail in rabbits and especially in dogs. Especial importance attaches to the behaviour of subcutaneous injections of the virus of rabies. Dogs often resist infection from injection of considerable quantities of even the most intense virus into the subcutaneous tissue. Ferran's super-intensive method of producing immunity in human beings is to inject at once the strong virus into the subcutaneous tissue, and this has been done in over 200 cases without injury. If the injection be made into muscular tissue, infection is more likely to follow. Di Vestea and Lagari have shown that while simple subcutaneous injections are often unsuccessful in producing rabies the application of the virus to the divided ends of nerve-filaments in a cutaneous wound is generally efficacious in causing the disease. Although deep and severe bites of rabid animals are the most dangerous, hydrophobia may result simply from a mad dog licking a scratch.

One of the most important discoveries of Pasteur is the demonstration of the fact that in animals or human beings which have died of hydrophobia the virus is contained most abundantly in the central nervous system, and especially in the medulla oblongata. It is found constantly also in the salivary and lachrymal glands, sometimes in the pancreas, but it is usually absent from the blood, kidneys, spleen, and liver. Only exceptionally is it present in the mammary glands and the neck. It is very rarely transmitted to the fœtus through the placenta.

There has been considerable discussion as to the manner in which the virus is conveyed from the seat of inoculation to the central nervous system.

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* *Revue de Laryngol., d'Otol., et de Rhinolog.*, Nos. 9, 10, 11, 1889.

The evidence points to the transmission of the virus along the nerves; in fact, it is claimed by Helman and others that the virus is capable of multiplication in nervous substance. Roux and others have found the virus present in the nerves of a bitten extremity when it has been absent in corresponding nerves of the opposite side. By killing animals at the proper period it has been ascertained that after inoculation in the tail or posterior extremities the virus makes its appearance in the posterior part of the spinal cord sooner than in the medulla oblongata, while the reverse holds true when the inoculation is made in the head or posterior part of the body. These observations, taken together with the inefficiency of intravenous injections, and the absence of the virus from the blood, lead to the conclusion that the virus passes along the nerve-trunks, although we have no information as to how this is accomplished.

It is a significant fact, which should be remembered in judging the results of Pasteur's treatment, that there is a period of so-called latent development of the virus in the central nervous system. In rabbits inoculated with the strongest virus (virus fixe) the period of incubation is six days; but as early as the fourth day the virus has been found in the medulla oblongata. Doubtless, therefore, in human beings, the virus is present for a longer or shorter period in the central nervous system before any characteristic symptoms of rabies appear. Careful observation has shown that in rabbits this period is not really a latent one, but is accompanied by elevation of temperature, increased frequency of respiration, slowing of the pulse-rate, and loss of weight.

There can no longer be any question that it is possible to render animals immune against rabies both before and after inoculations which would otherwise cause the disease. The independent and careful experiments of Ernst in this country (America) are free from all partisan bias, and have amply confirmed the statements of Pasteur on this point. The methods employed by Pasteur for protective inoculation against hydrophobia have been so often and so fully described in medical and other journals that Dr. Welch did not consider it necessary to repeat the description on this occasion. These inoculations are most effective in preventing the disease when undertaken soon after the reception of the poison with a large quantity of virus, and with the speedy employment of material containing the strongest virus (virus fixe). Animals may be rendered immune by single injections into the blood or the subcutaneous tissue of a large quantity of strong virus, whereas dogs which are bitten by mad dogs and which do not develop the disease, as often happens, are not left immune. Dogs which have once been rendered immune against rabies may preserve this immunity for at least two years, and doubtless for a longer period.

Pasteur attributes the immunity to the action of some substance which he calls *matière vaccinale*, contained in the virulent material, but not identical with the micro-organism causing rabies. That immunity against infectious disease may be secured by the injection of chemical substances produced by the growth of specific bacteria was first demonstrated by Salmon and Smith in the case of hog cholera, and has been subsequently demonstrated by Roux and Chamberland for malignant œdema, and by Wooldridge for anthrax. It has not yet been found possible to prove conclusively the correctness of Pasteur's supposition in the case of rabies, but there is much which speaks in its favour.

Encouraged by the results of his experiments upon animals, Pasteur, in July 1885, first applied to a human being his method of preventing hydrophobia by successive inoculations of the virus contained in the rabbit's medulla subjected to drying for different periods. During the years 1886, 1887, and the first half of 1888 there have been treated under Pasteur's supervision, either by the simple or by the intensive method of inoculation, 5,374 persons who have been bitten by animals either proven or suspected to be rabid. The mortality from hydrophobia, including even the cases which developed within a day after the cessation of treatment, was, in 1886, 1·34 per cent.; in 1887, 1·12 per cent.; in 1888, 0·77 per cent. If the fatal cases which developed within a fortnight after the end of treatment, and in which there is reason to believe that the inception of treatment was too late, be excluded, the mortality for 1886 falls to 0·93 per cent.; for 1887 to 0·67 per cent.; and for 1888 to 0·55 per cent.

Dr. Welch considered the various objections which have been made to Pasteur's method and to the value of his statistics. Some of these objections are of a purely hypothetical nature. Much force has been attached to Von Frisch's experiments, which seemed to some to invalidate the scientific basis of Pasteur's method of treatment. Von Frisch claimed that it is impossible to render animals immune after the reception of the virus of rabies in a manner certain to produce the disease. In opposition to Von Frisch it has been demonstrated by Pasteur and others that, in a large proportion of cases, the development of rabies may be prevented in dogs which have been inoculated beneath the dura mater with the strongest virus. The treatment, however, must not be deferred under these circumstances later than the second day, and must be by the intensive vaccinations. Bardach succeeded in this way in saving 60 per cent. of the dogs inoculated beneath the dura mater. This test is evidently the most severe one to which Pasteur's preventive treatment can be subjected, one far more severe than is required to meet the ordinary channels of infection with rabies. It must be admitted, therefore, that Pasteur's treatment rests upon a satisfactory experimental basis.

The criticisms raised against drawing favourable conclusions from the large mass of statistics published by Pasteur have been many, but the most important are that we are ignorant of the mortality following the bites of rabid animals, and that there are included in Pasteur's statistics an indeterminate number of persons bitten by animals not rabid. As regards the first point, there are various careful collections of statistics which show an average mortality of about 15 per cent. (Lablanc, Dujardin-Beaumetz, Horsley). All admit that bites by rabid animals on the head and face furnish a much higher mortality than this; it is given as 88 per cent. by Brouardel. To meet the second criticism, Pasteur's statistics, which are published monthly, are arranged in tables which embrace—*a*, persons bitten by animals proved experimentally to be rabid; *b*, cases in which the existence of rabies is certified by a veterinarian; *c*, cases in which there is reason to suspect rabies in the animal. Pasteur's statistics for class A, that is, for persons bitten by animals proven experimentally to be rabid, for the years 1886, 1887, and the first half of 1888, yield a mortality from rabies of 1·36 per cent.; or, if those who died within a fortnight after treatment be excluded, of 1·09 per cent.

Dr. Welch collected from Pasteur's reports for the first half of 1888 those bitten on the head and face by animals proved experimentally to be rabid. There were fifty-nine cases, with four deaths from rabies during treatment and two following treatment. Of the latter, one was seized three days after the cessation of treatment, and it is reasonable to suppose that in this case the treatment was begun too late. If this case and those dying during treatment be excluded, there remain fifty-four cases with one death, a mortality of 1·85 per cent.

In view of the universally conceded high death-rate following bites on the head and face by rabid animals, this result leaves no room for doubt as to the efficiency of Pasteur's treatment, although it is not unfailing. E. J. EDWARDES, M.D.

ARTICLE 1878.

DUNCAN, THORBURN, AND WALTON ON SPINAL SURGERY.

IN the *Edinburgh Med. Jour.* of March four cases of operation on the spine were reported by Mr. John Duncan, surgeon to the Royal Infirmary, Edinburgh. The first of these was a case of very marked angular curvature in the mid-dorsal region of the spine, with complete paraplegia, in a boy aged 11. The young patient could feel nothing below the groins, and could only move very slightly the great toe of the right foot. Mr. Duncan removed the spines and laminæ of the fourth, fifth, sixth, and seventh dorsal vertebræ. The membranes were found adhering to the bones by granulation tissue, which was easily scraped away by means of the sharp spoon. A plaster-of-Paris jacket was applied after the operation. On the seventh day the wound was quite healed, and the boy could move slightly his right knee. Seven days later he could localise a light touch with tolerable accuracy, and easily move his legs throughout. After a further interval of two months he was able to stand and to walk a few paces unsupported. This case has been published by Mr. Duncan as a confirmation from an independent source of the value of Dr. McEwen's suggestion for the relief of paraplegia due to caries of the vertebræ, and it is held that the operation, properly conducted, may now be considered not only as feasible, but as a safe and useful addition to surgical procedure.

In the first of three cases of fracture of the spine treated by operation, the detached spine of the eleventh dorsal vertebra was extracted, and the cord freed from pressure by removal of the broken neural arches of the tenth and twelfth vertebræ. The wound healed rapidly, and the general health of the patient, a male, aged 19, was completely restored, but no improvement took place in motion or sensation of the lower extremities, and, after an interval of six months, there was still complete paraplegia.

The subject of the second case—a man, aged 34—was admitted with very marked projection of the third lumbar spine, with complete paraplegia and retention of urine, due to recent injury. Mr. Duncan cut down on the prominent spine, and, finding it detached by fracture through the laminæ, removed it. The arch of the second lumbar vertebra was also removed. It was then seen that the body of the second vertebra was displaced forward to the extent of nearly an inch in relation to the third. The sheath, which looked blue and distended, was opened, and some blood-clots and bloody fluid evacuated. As the cauda seemed to have been but little injured, the wound in the sheath was stitched up. It was now found to be possible by manipulation to replace the vertebræ in position, and they were so retained by placing a large pad across the upper part of the abdomen and applying a plaster-of-Paris jacket. Sensation had greatly returned on the following day and the wound had healed, but on the second morning after the date of operation the patient died suddenly from an unsuspected rupture of the diaphragm, through which in the course of much agitation and restlessness he had forced his stomach and omentum. In the third case, which was one of fracture of the spine that had caused marked projection at the seat of the second lumbar vertebra with complete paraplegia, Mr. Duncan, seven weeks after the accident, removed the fractured spine and laminæ of the second lumbar vertebræ. The soft parts were so matted together as to be scarcely recognisable, but, after the removal of two other arches, the whole of the first lumbar vertebra was found to be displaced forwards for about an inch, and the cord was soon torn half through and formed two bends, each perfectly rectangular, at the upper surface of the second lumbar vertebra following the line of fracture. The cord was gently loosened from its bed above the seat of injury, and stitched by three fine catgut sutures to the portion below by means of the sheath. In doing this some cerebro-spinal fluid leaked away. This operation was followed by a persistent discharge of this fluid. At the last note of this case, made sixteen days after the operation, there was still a discharge, but in diminished quantity, of cerebro-spinal fluid. The patient was free from fever and otherwise well, but the paraplegia still persisted. With regard to the danger of escape of cerebro-spinal fluid in operations on the spine, Mr. Duncan states that there can be no fear of such accident if the membranes are entire, or even if recently torn, as it ought to be quite sufficient to stitch them up if the wound be kept aseptic. In the last case, in which the operation was performed seven weeks after the accident, it was found impossible to recognise, much less to stitch up, the membranes for a considerable extent above and below the fracture.

In a paper read before the Manchester Medical Society on March 6, and published as an original contribution in the *Medical Chronicle* for April last, Dr. William Thorburn gives the results of further clinical investigations in cases of injury to the spinal cord. Having shown in previous papers that it is possible to a considerable extent to unravel the complex arrangements caused by the intermixture of nerve-roots in the brachial plexus, Dr. Thorburn in his most recent contribution endeavours to prove by the records of twenty cases that, in spite of many and serious difficulties, one may succeed by a careful comparison of cases in obtaining from the evidence supplied by spinal injuries alone a fairly accurate conception of the functions of each of the nerve-roots which enter into the lumbar and sacral plexuses. On the basis of the results obtained in four cases Dr. Thorburn would assign to the third and fourth lumbar roots the innervation of the adductors, flexors, and abductors of the hip-joint, and of extensors of the knee-joint, and would place the adductors and flexors of the thigh at a higher level than the other muscles supplied from the anterior crural, so that probably the third lumbar root supplies the adductors and ilio-psoas, the fourth lumbar the rectus, quadriceps, and tensor fasciæ femoris. As the sartorius may retain powers of contraction when most or even all the other muscles of the lower limb are paralysed, to the nervous supply of this muscle a high position must be ascribed in the region of origin of the third lumbar root. Dr. Thorburn has been led by clinical observation to regard the posterior muscles of the thigh as supplied from a higher point in the cord than the muscles of the leg and buttock, and would assign the nervous supply of the former to the fifth lumbar root, which gives a very large branch to the sciatic, the first and second sacral roots being left for the supply of the glutei and leg muscles. The evidence, however, on this point is still very scanty. The arrangement of the sensory fibres of the roots, according to the evidence yielded by the author's collection of cases, may be thus summarised: the second lumbar root supplies the outer (?) and upper parts of the thigh; the third lumbar root the anterior aspect of the thigh below the sensory distribution of the second lumbar; the fourth lumbar, the anterior part of the leg; the fifth lumbar, the back of the thigh, except where this is supplied by the first, second, and third sacral roots; the first and second sacral roots, a narrow strip on the back of the thigh, the back of the leg and ankle, the sole and part of the dorsum of the foot; the third sacral root, the perineum, external genitals, and a 'saddle-shaped' area on the back of the thigh. Dr. Thorburn gives no instance of a lesion immediately below the first lumbar root, but it is not necessary, he states, to adduce evidence that this root supplies the ileo-hypogastric and ileo-inguinal nerves.

In the *Boston Medical and Surgical Journal*, March 21, 1889, Dr. George L. Walton reports five cases of simple dislocation in the cervical region of the spine, treated successfully as regards the preservation of life, without operation. Of these five cases, which were treated at the Massachusetts General Hospital, two (one unilateral, the other bilateral) are reported to be practically well, with scarcely any deformity and no paralysis. A third was one of bilateral displacement, with only moderate irregularity of the vertebral column. A fourth patient, at the time when the report was made, was out and about, though with the head bent to one side and twisted in the manner characteristic of unilateral dislocation, and with paralysis causing partial disablement. The fifth patient had the head in a similar position, and was affected with progressive paralysis of an upper extremity, indicative of pachymeningitis. Reduction was attempted, but unsuccessfully, in one only of these five cases. In two cases there was practically no paralysis. The fourth case reported in this paper was one of typical bilateral dislocation, the third cervical vertebra having been displaced forward on the fourth. Paralysis of all the extremities followed through pressure of the posterior arch on the spinal cord. In this case spontaneous replacement and recovery ensued after failure of an attempt to effect reduction, and after progressive paralysis and exhaustion had lasted over a period of fifteen months. The respiration, it is stated, was unaffected, a fact attributed to the probable departure of the roots of the fourth cervical nerve from the cord above the articulation of the third and fourth vertebræ. In the last case there was unilateral dislocation of the atlas on the axis. The manner in which this injury was produced, Dr. Walton thinks, is probably unique. The patient, a man 44 years of age, and of unusual muscular development, while wrestling put up his right hand to throw off his opponent's arm which was around his neck, his own head being bent at the time to the right. In making a violent effort he suddenly felt dizzy, and heard something snap. No very serious symptoms followed this injury. When seen by Dr. Walton, twelve months after the accident, the head was held stiffly bent to the right side, with the chin turned somewhat to the left, and the face directed downwards. The grasp of the right hand was not quite so strong as that of the left, and there was muscular weakness in the right arm, although there was no wasting or coldness, and no disturbance of electrical reactions. The tongue was turned towards the right side and could not be moved to the left, and was greatly atrophied on the right side. The uvula was deviated to the left side, and the right side only of the palate reacted to mechanical stimulus. Since the accident there had been difficulty in mastication. The right pupil was slightly larger than the left, and reacted less promptly to light. The watch was heard at a distance of 4 inches from the right ear and of 10 inches from the left. Dr. Walton has found no record of paralysis of the cranial nerves in similar cases, and thinks that, in his patient, it was due to extensive effusion in the region of the medulla, pressing on the hypoglossal, glosso-pharyngeal, facial, and auditory nerve-roots.

W. JOHNSON SMITH.

ARTICLE 1879.

ESMARCH ON CANCER.

IN a paper on the etiology and diagnosis of malignant growths, especially those of the tongue and lip, read at the last Congress of the German Surgical Society, Professor von Esmarch first pointed out that, although extensive and elaborate statistical records of cases of cancer treated by Billroth and others have of late years been published, no addition of importance has been made to our knowledge of the etiology of malignant disease. These statistics throw no satisfactory light on the questions of the origin of cancer, its hereditary transmission, and its connection with other diseases, and also with regard to the diagnosis are of doubtful value. Our views with regard to the nature of tumours have been changed during the long periods over which such copious statistical returns necessarily extend, and our diagnostic methods have not yet been improved to such a degree as to guard against all error. Reference is made to a case in which after excision of supposed cancer of the lip there was a speedy return of the tumour in the scar. An anti-syphilitic treatment was then prescribed, and after it had been continued for a month the swelling of the lip had disappeared and the patient was cured. Another case is mentioned, in which, after extirpation of the penis and both testes for what had been diagnosed as malignant disease, the persistent ulceration was finally cured by means of the specific treatment of syphilis. The growths most frequently mistaken for malignant tumours are gummata, or, to use a more suitable term, syphilomata. These often resemble in their structure true sarcomatous and fibrous tumours. It is stated that many of these latter forms of tumour, especially fibroma of muscle, spindle-celled sarcoma, keloid of scar tissue and malignant lymphoma, ought to be regarded as syphilomata. Anti-syphilitic treatment, Von Esmarch asserts, is especially beneficial in cases of sarcoma of muscle, 50 per cent. of the cases observed in the Kiel clinique during the past year having been thus cured. Tubercular lesions, especially ulceration of the lips, larynx, and breast, and also actinomycotic tumours, are, it is stated, often mistaken for cancer. Twenty years ago Von Esmarch removed from the tip of a man's tongue an ulcerated growth, which, after examination by an eminent pathologist, was declared to be adenoma. Two years ago an apparently analogous case came under observation. The growth was diagnosed as adenoma, and excised ; but on microscopical examination proved to be tuberculous. In order to avoid errors of this kind, and to save the patient from an operation likely to do harm rather than good, Von Esmarch insists on the propriety of submitting any doubtful growth to careful microscopical examination before resorting to excision. He strongly advocates the removal of small pieces of the growth for such examination, and if the diagnosis still remain uncertain, after repeated introduction of a suitable instrument, he would make a free incision into the growth, and, if he thought it necessary, would not hesitate for exploratory or diagnostic purposes to perform such serious operations as laryngo-fissure, cystotomy, and laparotomy. If the growth be found, on very careful microscopical examination, to be composed of granulation tissue, then an active anti-syphilitic treatment, consisting in the administration of mercurials and iodide of potassium, should be carried out. Such treatment should be steadily persevered in for some time, notwithstanding an apparent failure at first, or even if it seem to be doing harm, as complete success is often suddenly attained after a long period. The malignancy of a tumour, Von Esmarch argues, is by no means associated with its structure. Of two growths of like morphological character, in one malignancy will be slightly marked or quite absent, whilst in the other it will exist in an extreme degree. Statistics teach very little concerning the etiology of cancer ; they simply show that certain irritants of a chemical or physical nature—as, for instance, soot, tobacco, paraffin—may act as exciting causes of the disease, but they do not explain why such irritation acts in this way in one subject only out of a thousand. The 'germ inclusion' hypothesis of Cohnheim, the views of Thiersch and Waldeyer, and the idea of an infective origin and the action of micro-organisms, must at the present time, it is stated, yield in importance to Virchow's theory of predisposition, and the weakened resistance of the tissues of the body to the development of cancer. This predisposition, it is pointed out, is the result of an hereditary transmission, and the idea is suggested that syphilis in some remote ancestor may, after it has left some few generations quite free, excite in the more recent descendants a tendency in the tissues to proliferate, and so set up sarcoma or fibroma in the connective tissue, and carcinoma in the skin. With regard to treatment, cancer is held to be curable if freely and thoroughly removed by the knife in an early stage.

W. Johnson Smith.

Article 1880.

KNAPP AND BRADFORD ON A CASE OF TUMOUR OF THE BRAIN.

In the *Boston Medical and Surgical Journal*, Nos. 14, 15, and 16, 1889, a full report is given of a case under the care of Dr. Knapp, of Boston, in which a tubercular growth was removed by Dr. Bradford from the motor region on the right side of the brain. The patient, a man, aged 32, presented the usual symptoms of tumour—headache, vertigo, vomiting, and optic neuritis—and the situation of the lesion was indicated by the help of the additional symptoms of convulsions, paralysis with contracture, anæsthesia, and loss of muscular sense. The situation and size of the tumour having been diagnosed by Dr. Knapp on Dec. 28, Dr. Bradford trephined the skull. Two contiguous openings were made, and the intervening portion of bone was removed by a Hey's saw, an orifice being thus formed of the extent of two and a half by three inches. The dura was found to be tense, and the brain bulged after this membrane had been incised. The surface of the cerebral cortex was free from congestion and of normal colour. After incision of the cortex the finger was inserted, and the tumour gently separated from the brain tissue and turned out. The patient, who was in a very exhausted condition, died from shock three-quarters of an hour after the operation. The tumour, which proved to be a caseating tubercular deposit, weighed 35¾ grammes, and measured 7 by 4 and 3 centimètres. In his comments on this case Dr. Knapp gives a useful summary of the twenty-three recorded cases in which an operation has been performed for removal of intra-cranial tumour. In fifteen of these the growth was removed, in one it was found but not removed, in three it was not found, and in four cysts were removed or evacuated. It is acknowledged that the chances for operative treatment of cerebral tumour are not great. According to the results of the pathological investigations of Bernhardt, Hale White, and Starr, the percentage of cases in which the tumour is situated in an accessible region and gives rise to definite focal symptoms varies from 5 to 7 per cent., tumours of the cerebellum being excluded. The advisability of removing cerebellar growths is regarded as still doubtful. In Dr. Knapp's opinion, in cases where the conditions of locality are favourable, carcinomata are the only forms of tumour which contra-indicate operation. All agree that gliomata and sarcomata should be removed, for even in cases of infiltrated growth an operation, as Horsley has shown, may do good. Gummata do not always yield to anti-syphilitic treatment, and have a tendency to persist as inert tumours after most thorough specific treatment. The objection to the removal of a tubercular growth from the brain, on the ground of probable recurrence and extension of the disease, would be just as applicable to the excision of a tubercular gland or joint. In two cases of successful removal the cerebral tumour was tubercular. Dr. Knapp holds that in his case, in which the growth was completely encapsuled and the surrounding tissue apparently healthy, the risk of local infection seemed slight. In his remarks on cranio-cerebral topography he endeavours to prove by the results of measurements on fifty skulls that Broca's method for finding the bregma and the top of the fissure of Rolando are utterly inaccurate and untrustworthy. In the course of his remarks on the surgical aspects of this case, Dr. Bradford states that in the operation the brain was explored with the finger. He holds that when no abscess or cyst is suspected an exploring needle is useless, and that in the majority of cases the finger is the best searcher and, if carefully guided, the least injurious. In this case the cortex was incised for half an inch, and the finger carefully introduced to a depth of three inches. W. Johnson Smith.

Article 1881.

STICKER ON THE INTER-RELATION BETWEEN THE SALIVA AND GASTRIC JUICE.

Dr. Georg Sticker is contributing a series of papers to the *Deutsche med. Zeitung* on 'The Importance of the Saliva in Physiological and Pathological Conditions.' After treating of 'mouth digestion,' he goes on to speak of the inter-relation between the saliva and gastric juice. In a former work (Volkmann's *Sammlung*, p. 297, 1887) he published the discovery of a hitherto unknown effect of the one secretion on the other, which was in direct opposition to the theory that the inter-relation between saliva and gastric juice was of such a character that the one secretion could develop its action only at the cost of the other secretion. He then thus stated his case: In the human organism the saliva of the mouth plays an important part in the formation of effective gastric juice; for the falling out of the effect of mouth saliva causes a decrease or cessation of gastric juice secretion; that therefore the falling out of saliva secretion not only causes a cessation of amylolysis, but also injuriously affects the proteolysis in the stomach. This fact was first observed in a simple case, which was remarkable from the fact that complete cessation of saliva secretion occurred simultaneously with considerable decrease of gastric juice secretion, and that restored saliva secretion brought about complete restitution of the impaired gastric digestion. By experiments on the human subject it was further demonstrated that by artificially impeding the access of saliva to the ingesta during a meal composed of albumen and amylum a striking retardation, not to say stoppage, of the chemical gastric function was caused. The decrease of the gastric juice depends equally on its two specific factors, acid and ferment. The fact that it has been found by experiments that with a purely albuminous diet the discontinuance of the saliva action produces a diminution of pepsine secretion shows that Schiff's and Herzen's discoveries concerning the action of 'peptogenous' substances do not suffice alone to explain the diminution of ferment. The co-existence of restriction of hydrochloric acid secretion in the stomach with cessation of the saliva agrees entirely with a hitherto little understood statement made by Bidder and Schmidt. In eleven experiments on a dog with intact salivary ducts, 0·39 gramme potash was required to neutralise 100 parts of filtered gastric juice, while with a dog whose salivary ducts had been ligated only 0·365 gramme of potash was required to neutralise 100 parts of gastric juice. This fact, although it cannot be satisfactorily explained, proves yet beyond denial that mouth saliva plays an essential part in the formation of effective gastric juice. Some idea of the truth of this fact had already dawned in the minds of such men as Spallanzani and Wright. The latter has said, for example, 'The saliva stimulates the stomach by its contact with it, and excites it to increased activity.' The old theory of the sympathetic relations between mouth and stomach is, in spite of exaggeration, a true one, and too little considered in the present day. Schiff's and Herzen's experiments throw much light on the much doubted relations between these organs. Let there but be a faithful endeavour to follow up such researches, and the truth must be proved. The Stagyrite's (Aristotle's) profound saying is true in this matter, too, 'In nature there is nothing pushed in disconnectedly, as in a bad tragedy.'

John Elliott.

Article 1882.

EDEMSKY, BOGOMOLOFF, AND OTHERS ON ANTIFEBRIN IN FEBRILE DISEASES.*

Following the suggestion of Professor T. M. Bogomoloff, Dr. Vasily M. Edemsky, of St. Petersburg, has carried out (*Meditzinskoiĕ Obozreniĕ*, No. 4, 1889, p. 415; and *St. Petersburg Inaugural Dissertation*, 1888, pp. 129) a course of elaborate clinical experiments for the purpose of studying the therapeutic effects of antifebrin in various febrile affections. His materials consisted of 25 cases which came under his observation in the Krasnoselsky Udelnyi Hospital, and of which 8 were referred to typhoid fever, 6 to pleuropneumonia and croupous pneumonia, 3 to acute or subacute rheumatic polyarthritis, 2 to chronic pneumonia, 2 to pleurisy, 1 puerperal fever, 1 intermittent, 1 facial erysipelas, and 1 gangrene of toes (*post pernionesis*). The main outcome of the author's researches may be given, in brief outlines, as follows:—

A. The Influence of Antifebrin on the Temperature. 1. Speaking generally, the rate of the antipyretic action is directly in proportion to the size of the dose used. 2. Given equal doses, the strongest effects are obtained in typhoid fever; then follow, in a descending scale, croupous pneumonia, pleurisy, chronic pneumonia, rheumatism, and, finally, puerperal fever. 3. The drug should be given in from 10 to 20 grain doses 2 or 3 times a day, or 5 grains every hour. The latter mode of administration is by far the better, since the fall of the temperature proceeds then more slowly and evenly, without being accompanied by profuse sweats, cyanosis, or collapse. Hence, it is possible to administer quite safely and conveniently even as much as 80 grains of the drug a day. 4. For the first 20 or 30 minutes after a dose, the temperature remains unaltered, but subsequently begins to sink about 0°·1 C. every 5 or 10 minutes. 5. A combined administration of antifebrin with antipyrin, from 3 to 5 grains of each, gives slighter antipyretic effects (including a later occurrence of a maximal fall) than that of antifebrin alone. [Professor T. J. Bogomoloff, of Gatchīna,[*] strongly recommends a combined administration of antifebrin in fractional doses (up to 2 or 3 drachms in twenty-four hours) every hour, with 5 grains of antipyrin, in puerperal and surgical fever, pulmonary phthisis, and acute rheumatism.—*Rep.*] 6. Antipyrin and thallin, in equal doses, and salicylate of soda, in double ones, are very inferior to antifebrin in respect to their antipyretic effects.

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* Edemsky on the effects of antifebrin in various febrile diseases, especially in regard to the temperature, pulse, respiration, urine, and nitrogenous assimilation and metabolism (*Meditzinskoiĕ Obozreniĕ*, No. 4, 1889, p. 415; and *St. Petersburg Inaugural Dissertation*, 1888, pp. 129).

B. The Influence on the Pulse and Respiration.—1. The fall of the temperature is accompanied by a decrease in frequency of the pulse and respirations. 2. The decrease, however, is by no means always proportionate to the size of the dose. [Thus, in puerperal and typhoid fevers, smaller doses sometimes improve the pulse and respiration far more considerably than larger ones.] 3. Further, given equal doses of the drug, their effects vary according to the disease. [Thus, given 5-grain doses, the affections may be arranged in the following descending series in regard to the antipyretic effects: typhoid, croupous pneumonia, pleurisy, puerperal fever, chronic pneumonia. In the case of 10-grain doses: erysipelas, croupous pneumonia, chronic pneumonia, pleurisy, rheumatism, typhoid; 15-grain doses: croupous pneumonia, typhoid; 20-grain ones: pleurisy, croupous pneumonia, erysipelas, typhoid.] 4. A combined administration of antifebrin with antipyrin shows a less marked influence on the pulse and respiration than antifebrin alone. 5. Given all other equal conditions, antipyrin, thallin, and salicylate of soda likewise prove to be inferior to antifebrin. 6. The tension of the pulse (as measured by Basch's apparatus) is increased under the influence of antifebrin when the drug is given in moderate and even in more or less large doses.

C. Nitrogenous Assimilation and Metabolism.—1. Of 4 cases examined, in 3 the assimilation increased, in 1 decreased. 2. Of 3 cases examined, in 2 the metamorphosis increased, in 1 decreased. 3. The amount of extractive substances in the urine lessens, while that of the urea nitrogen rises in a corresponding degree.

D. General Conclusions.—1. Antifebrin may be especially recommended in typhoid fever as a good substitute for hydrotherapeutic methods, which are rather troublesome, and by no means invariably successful. While depressing the temperature, the drug subdues delirium and improves sleep and appetite. 2. The remedy is further indicated in pleurisy and acute rheumatism where it promotes the absorption of effusions. [The same may be said, according to Dr. Bogomoloff, in regard to croupous pneumonia, *loc cit.*—*Rep.*] 3. Antifebrin is one of the best remedies for erysipelas of the face or head, where it rapidly relieves headache. 4. In febrile affections generally, antifebrin should be preferred to antipyrin, quinine, thallin, or kairin, since 'it depresses the temperature through its influence on the nervous system by increasing loss of the systemic heat, without causing any injury to the nerve-centres, or heart, or kidney.' 5. When employed in frequent small doses the drug gives rise to collapse but exceedingly rarely, and when it does the symptoms are dependent upon either some impurity of the preparation employed, or idiosyncrasy of the patient. In the *Meditz. Obozrenīē*, No. 5, 1887, p. 521, Dr. T. J. Rüdenko, of Moscow, writes that he has tried antifebrin, in doses of from 2 to 4 grains, repeated in an hour or so (that is, from 4 to 8 grains a day), in 11 febrile cases (5 of typhoid, 1 croupous pneumonia, 2 pleuropneumonia, 1 pleurisy, and 2 chronic pneumonia), and came to the following conclusions. 1. The drug is a cheap, tasteless, and reliable antipyretic, free from any accessory effects, except slight rigors and perspiration. 2. It does not show, however, any influence on the course of any of the diseases named. 3. Sometimes (in 3 pneumonic cases) it gives rise to a 'black beer' discoloration of the urine, resembling that from kairin. 4. The fall of the temperature varies between 0°·5 and 2°·5 C., being mostly 1°·2 or 1°·8 C. 5. The amount of the decrease varies according to the patient's individual peculiarities and the height of fever, but, speaking generally, is larger when the drug is used in repeated small doses. 6. The decrease lasts from two to four hours, the temperature returning to its previous level in five or six hours. 7. The pulse slackens from 8 to 18 beats per 1′. 8. In healthy persons (three cases), the same doses of the drug cause, in an hour, a rise of the temperature, amounting to 0°·1 or 0°·2 C., lasting two hours, and accompanied by a slight acceleration of the pulse.

In the *Meditz. Obozrenīē*, No. 1, 1888, p. 72, Dr. Ivan A. Albitzky, of Valkī, describes the case of his wife, suffering from advanced pulmonary phthisis, and treated after Kremīansky's method by the inhalation of aniline and the internal use of antifebrin. The latter was given in 10-grain doses, two or three times daily, day by day, for a twelvemonth. In all, the lady ingested about four pounds of the drug. No unpleasant effects from such prolonged use were ever noticed, the temperature being successfully kept by the means at 37°·5 or 37°·8 C. On the whole, the patient greatly improved, though she became blue (from aniline). At the Second General Meeting of Russian Medical Men at Moscow, Dr. Alexëi I. Shtcherbakoff, house-physician to Professor M. P. Tcherīnoff's clinic, made (*Transactions of the Meeting*, vol. i., 1887, p. 8) a communication on the treatment of pulmonary phthisis by inhalations of benzine fumes and antifebrin internally, in from 2 to 4-grain doses, in wafers. On the ground of eleven cases, the author states that antifebrin represents a very valuable antipyretic means in the therapeutics of consumption, though it does not exercise any appreciably direct influence on the disease itself. In a majority of cases, daily doses varying from 2 to 12 grains are said to secure a permanent apyrexia during the whole day and night, the decrease of the temperature not being accompanied by sweats, cyanosis, or rigors. In a certain proportion of cases, however, even larger doses (28 grains a day) fail to establish a stable defervescence. In such patients the drug may occasionally give rise to collapse, with a rapid fall of the temperature down to 34° C., and that even when the remedy is used in such small quantities as 4 grains. Now and then, 'antifebrin cannot be tolerated in consequence of its causing a kind of intoxication or a state resembling that arising from inhalation of coal-gas.' As to the benzine inhalations (every hour for five minutes, 4 drachms daily), they are considered to invariably alleviate expectoration and cough, and never to be accompanied by any untoward effects, beyond some headache or fulness about the head. In some patients they even seem to diminish the number of tubercle-bacilli in the sputa and to check altogether the progress of the pulmonary process.

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[*] *Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, No. 6, 1889, p. 174.

At the same meeting, during a lively discussion following Dr. Anseroff's communication (*vide* the LONDON MEDICAL RECORD, 1886, p. 144), Dr. Jakov I. Trüsevitch, of St. Petersburg, said (*Meditz. Obozrenïë*, Nos. 2 and 3, 1887, p. 178) that he had seen grave collapse following an 8-grain dose of antifebrin in a typhoid girl of 12. Similarly, Dr. S. S. Goloüsheff, of Moscow, had observed collapse from a 5-grain dose in a woman. Curiously enough, a subsequent gradual increase of the dose (up to 8 grains) in the same patient was tolerated quite well. He came to the conclusion that the organism may get habituated to the remedy. Dr. A. G. Kramnik, of Smolensk, reported (*Vratch*, No. 4, 1887, p. 83) an instance of collapse from antifebrin in a patient with typhoid fever of an intermittent type. He believes that, in some cases at least, collapse may be caused by the antipyretic action of the drug coinciding with a spontaneous fall of the temperature (the result being a decrease far below the standard). Dr. V. I. Antüshevitch, a lady physician of Orlov, drew attention to the necessity of the utmost caution in the use of powerful antipyretic drugs in general, since they may give rise to some other very unpleasant complications in addition to collapse. Thus, in a strong woman suffering from typhoid fever, 'one gramme of antipyrin had been followed by a striking dilatation of the peripheral blood-vessels, with stasis and consecutive gangrene of a foot.' Such cases were thought to be 'caused by a depressing action of antipyretics on the heart.' In his remarkable work 'On Infection and Phthisis' (Kharkov, 1887), Professor Jakov S. Kremïansky warmly eulogises the internal use of antifebrin in consumption, not only as an antipyretic, but also as a bactericide. The author frequently observed a distinct diminution of tubercle-bacilli in the sputa, effected by the drug. As a rule, he gives from 3 to 5 grains, three or four times daily, but in such cases, where the doses fail to secure a permanent defervescence, he increases the amount sometimes to 60, or even 70, grains a day. He never yet met with a single instance of collapse or any other untoward effects from the drug.—*Rep.*

V. IDELSON, M.D.

ARTICLE 1883.

ENGSTRÖM ON A SUCCESSFUL CASE OF CÆSAREAN SECTION.

IN the *Finska Lakaresällskapets Handlingar* for February 1889, Dr. Otto Engström reports a successful case of Cæsarean section, which was performed in the Maternity Hospital at Helsingfors by himself.

The patient, aged 23, a dressmaker, unmarried, entered the hospital on May 25, 1888, at ten in the morning. She was delicate when a child, and did not walk until six years old. Since then she had enjoyed good enough health. She could not remember the time of her last menstrual period. It was at the beginning of February when she first noticed the fœtal movements. The pains had begun early that morning, being feeble with long intervals. State of the patient on her entry—A dwarf of 43½ inches in height. Head relatively large. The features coarse, though not wanting in intelligence. The thoracic part of the dorsal spine slightly scoliotic and kyphotic, the lumbar part showing marked lordosis. The lower limbs very short, the distance between the sole of the foot and the great trochanter being only 45 centimètres. The length of the arm (to the end of the middle finger), 36 centimètres. The fingers and toes were also very short. The dimensions of the external conjugate were 4·5 centimètres; diagonal conjugate, 5·75 centimètres. The articulation between the first and second sacral vertebræ projecting forwards. On external examination the abdominal walls were found to be very much distended, showing reddish-blue striæ. Under the umbilicus there was a gap in the recti muscles. The uterus, which was a little turned to the left, rose to within three finger's breadths off the xiphoid cartilage. By palpation the left round ligament could be easily distinguished. The back of the fœtus a little more in front, its head bent to the left, being in front and to the left side supported on the horizontal ramus of the pubes. By external measurement through the abdominal wall and attenuated uterine wall, the head was found to be 12 centimètres in length and 10 centimètres in transverse diameter. In front could be heard the vigorous and regular pulsations of the fœtal heart. Internal examination showed the os uteri sufficiently dilated to admit the finger; the cervix partly intact, nearly 2 centimètres of the canal not yet dilated. The fœtal envelopes were intact, the head of the fœtus movable below the pelvic outlet. The pains gained in intensity, and about three o'clock they had become strong, with intervals of from five to eight minutes. At this time the os was sufficiently dilated to allow the entrance of two fingers. The cervix was obliterated. The circle of contraction just in the middle line between the umbilicus and the symphysis.

The woman was now made to take a rest; she was given a hot bath and spared all useless examination. In the morning the vagina was energetically douched with a 2 per cent. carbolic solution. The bowels were relieved by enemas, and light nourishment given. At 3.35 P.M. Cæsarean section was performed. Immediately before the operation the vagina was again washed with carbolic solution, then carefully tamponned with iodoform gauze. Other antiseptic precautions were taken, and the operation was performed in the room set apart for laparotomy in the hospital. The median abdominal incision began about four finger-breadths below the xiphoid process, and descending to the left of the umbilicus to about two finger-breadths above the pubic symphysis. The uterus was removed from the abdominal cavity, and the wound closed in a provisional manner by two of Koeberlé's hooks. At this point the frequence of the pulse diminished, and the breathing became feeble. The administration of chloroform was stopped. Round the neck of the uterus, above the fœtal head, there was passed, without being tightened, a double India-rubber tube, the ends of which were held by an assistant. An incision was then quickly made in the uterine wall. At the same moment the tube round the neck was tightened and kept in position. The incision through the uterine wall, which was about ·75 centimètre in thickness, touched the placenta. A clot of dark blood came out of the uterus. The right hand introduced through the wound quickly detached the placenta. In trying to rupture the membranes in order to extract the fœtus, they were found to be extremely tough. Without delay the whole uterine contents were removed at once. But at the moment when the fœtal head following behind should have passed through the incision in the uterus the edges contracted round the neck of the fœtus. For an instant the head remained inside the uterine cavity, until it was made to pass out by pressure from without. Through the membranes the meconium could be seen staining the fœtus and liquor amnii. The membranes were at once ruptured, and scarcely a minute after the tube was passed round the neck of the uterus the infant was in the open air.

It was slightly asphyxiated, although the heart was beating fairly, but through the usual treatment the breathing soon improved. The pulse of the mother at this point had stopped, and respiration had ceased. Artificial respiration had to be practised, when these dangerous symptoms were obviated. The operation then went on as follows :—After having disengaged the internal wall of the uterus, now sufficiently relaxed, from the remainder of the placenta and membranes, it was carefully washed out with corrosive sublimate solution, and an iodoform dressing applied. At a distance of about 3 centimètres from one another and from the angles of the wound four silk sutures were inserted through the whole thickness of the uterine wall, but not taking in either the peritoneum or the decidua. At first these sutures were not tied. The uterine wound was sutured by means of chromic gut. On loosening the tube round the neck, the uterine walls bled freely, and a good deal of blood escaped into the vagina. The uterus being in a relaxed state, gentle massage was used. After removing the tampon the vagina was douched with a 1 per cent. carbolic solution, at 46° C., the hæmorrhage at once ceasing. Neither blood nor amniotic fluid had penetrated into the abdominal cavity. The uterus was replaced. In closing the abdominal wound both deep and superficial sutures were used. The whole operation had lasted forty-five minutes. A binder was applied. The vagina was tamponned afresh with iodoform gauze. The patient, being placed in bed, rapidly came round and made a good recovery, and in three weeks was able to rise and go about. On Sept. 1 the cicatrix of the abdominal wound was small and white. Between the umbilicus and the symphysis in the linea alba there was a small gap, but no hernia. In measuring the conjugate across the abdominal wall, it was found to be rather less than 4·5 centimètres. The diagonal conjugate was 5·75 centimètres. The measurements of the fœtal head and conjugate made before the operation corresponded nearly enough to those made after to furnish the indication for operating, and to show the impossibility of delivery by the natural means. The child, a female, weighed 5 lbs. Length, 41 centimètres. Dimensions of the head—occipito-frontal diameter, 10 centimètres ; bi-parietal, 9 centimètres ; bi-temporal, 8 centimètres ; circumference, 33·5 centimètres. The child throve under the care of a wet-nurse.

W. W. Ireland, M.D.

Professor Rudolf Voltolini, of Breslau, the well-known laryngologist, celebrated his seventieth birthday on June 17.—Dr. Weber-Liel, some time professor of otology in the University of Jena, a post which he was obliged to relinquish a few years ago on account of ill-health, has now so far recovered that he has resumed practice at Bonn.—There is much speculation as to who will be chosen to fill the Chair of Obstetrics at Vienna, left vacant by the death of Professor Breisky.

SURGERY.

RECENT PAPERS.

1884. McArdle. — The Operative Treatment of Articular Tuberculosis. (*Jour. of Med. Science*, March-April 1889.)

1885. Heidenhain.—The Causes of Local Relapse of Cancer after Removal of the Breast. (*Congress of the Society of German Surgeons*, April 24.)

1886. Gangolphe.—Trephining of the Pelvis in the Treatment of Suppurative Psoitis. (*Revue de Chirurgie*, March.)

1887. Warren.—On Cancer of the Breast. (*Boston Med. and Surg. Jour.*, April 11, 1889.)

1888. Powers.—On Kocher's Method of reducing Sub-coracoid Dislocation of the Humerus. (*New York Med. Record*, March 30, 1889.)

1889. Nélaton.—On Irreducible Luxations of the Hip. (*Archives Générales de Médecine*, April 1889.)

1890. Bryant.—On Simultaneous Ligature of both External Carotids in Cases of Naso-pharyngeal Growth. (*New York Medical Journal*, May 11.)

1891. Casati, L.—Three Cases of Traumatic Tetanus cured by Large Doses of Hydrochlorate of Pilocarpine in Hypodermic Injection. (*Gazz. degli Ospitali*, May 26, 1889.)

1892. Ruggi, Professor.—Laparotomies performed in the Last Year. (*Gazz. degli Ospitali*, May 12, 1889.)

1893. Richardson.—On Surgical Interference in Acute Intestinal Obstruction. (*Asclepiad*, May 1889, p. 103.)

Art. 1884. *McArdle on the Operative Treatment of Articular Tuberculosis.*—In an original communication on the treatment of tubercular disease in and near joints (the *Dublin Journal of Medical Science*, March-April 1889), Mr. J. S. McArdle advocates the early removal of tubercular deposits when situated in the ends of long bones, or involving intra-articular structures. The study of the ultimate results of resection for tubercular disease, especially if advanced, is very disheartening, and, it is held, if the spread of the disease can be prevented at an early stage, there is a fair chance of thoroughly eradicating it, whilst if a circumscribed centre be allowed to infect a neighbouring joint fungous synovitis, osteo-myelitis, or other serious trouble will result, often leading on to destruction of the joint, and, it may be, to general infection. Mr. McArdle argues that, as early resection is followed by rapid healing of the wound and cure of the patient with good ultimate results, so the simple removal of localized centres should still further reduce the immediate as well as the ultimate mortality. Cases are referred to in which the author removed with good results well-defined masses of tubercle from the following situations : behind the ligamentum patellæ, the popliteal space, the inner side of the knee, the back of the wrist, the front of the elbow, and the calcaneo-astragaloid joint. As results of early operative interference in such cases of primary tuberculosis, synovitis is cured, extension of the disease is prevented, and a sound movable limb produced. The following are the rules which are laid down by Mr. McArdle in undertaking these cases of arthrotomy :—(1) to make the incision or incisions in such position that arthrectomy can be carried out if necessary, or even complete resection if required ; (2) the openings should be sufficiently free to allow of complete removal of diseased structures ; (3) the incision should be in a proper position to allow of free drainage. Neglect of any of these precautions would, it is stated, lead to much delay, incomplete removal of diseased tissue, or generalisation of the tuberculosis. Arthrectomy, Mr. McArdle asserts, has not the support lent by numerous good results, and many of the recorded cases show that this operation should be limited to cases in which the disease is very well defined, and in which bone disease, superficial erosions being excepted, is absent.

1885. *Heidenhain on the Causes of Local Relapse of Cancer after Removal of the Breast.*—Heidenhain, of Berlin, has recently put on record the results of some investigations on the causes of the frequent return of cancer after removal of a breast affected with this disease (Congress of the Society of German Surgeons, April 24). Examination of eighteen cancerous breasts removed by operation has led to the conclusion that such relapse is due to the retention in the wound of small portions both of the growth and of the diseased mammary gland. This incomplete removal is due for the most part to anatomical conditions. The fascia pectoralis, it is stated, has very close relations with the muscle on the one hand, and with the breast on the other, being continuous by means of processes of connective tissue with the perimysium of the pectoralis major and with the fibrous septa of the gland. Some of the smallest lobules of the gland penetrate the fascia and rest in contact with the muscle, and so are likely to be left behind in excision of the breast. In corpulent subjects the fascia is enclosed in a thick layer of fat, interposed between the pectoralis major and the mammary gland. This layer of fat, which encloses a number of gland lobules, cannot be completely separated from the pectoralis without removal at the same time of the anterior surface of this muscle. In two-thirds of his specimens of mammary cancer Heidenhain found small metastatic deposits in the lymphatics passing from the gland to the pectoral muscle through the retromammary connective-tissue and fat. In cases in which the affected breast can be moved freely over the fascia, these cancerous metastases may be followed as far as the surface of the muscle, but do not extend into its interior. In such cases, therefore, it will suffice to remove just the surface of the muscle; but when the cancerous gland has contracted close adhesions to the pectoralis, the fibres of which are consequently mixed with abundant cancer elements, the whole of this muscle, together with its periosteal attachments, ought (according to Heidenhain) to be removed. Such procedure, it is stated, does not result in any serious functional disturbance. In cases in which the whole muscle had been removed by Küster, the subsequent impairment of motion of the upper extremity was so slight as to be scarcely appreciable by the patients.

1886. *Gangolphe on Trephining of the Pelvis in the Treatment of Suppurative Psoitis.*—The *Revue de Chirurgie* for March contains a paper by Dr. Michel Gangolphe, of Lyons, in which trephining of the ilium is advocated in the treatment of suppurative inflammation of the psoas muscle, whether of infective or traumatic origin. This affection is regarded as a very serious one on account of the critical condition of the patient in the majority of such cases, of the extent of mischief, and of its possible extension to the hip-joint. Prompt release of the pus is the best means of preventing a fatal issue. If the surgeon be guided by the general practice, and wait until fluctuation be felt in the lumbar or inguino-crural region, he will certainly find that the whole of the psoas muscle has then become disorganised, and possibly may favour by his delay perforation of the hip-joint and secondary arthritis, which complication invariably leads to a fatal issue. The operation devised and performed by Dr. Gangolphe presents no difficulty, it is stated, and is free from danger. The ilium is perforated at a part three-fingers' breadths below the highest point of the iliac crest, and five-fingers' breadths from the antero-superior spine. An incision about 3 inches in length having been made through the skin and fascia parallel to the course of the glutei, the fibres of these muscles are separated by director and finger. A second incision about 2½ inches in length having been made through the skin only, at right angles to the former, in order to allow free exposure of the ilium at the seat of operation, the periosteum is detached, and the whole thickness of the bone removed by gouge and mallet, so as to form an orifice of about the size of a two-franc piece. The situation of this orifice, M. Gangolphe has found by anatomical observations, corresponds in the horizontal decubitus of the subject to the most dependent part of the internal iliac fossa, and also to the thinnest part of the ilium. Through this orifice the abscess cavity can be readily drained and washed out by injected fluids. This operation may be associated with the ordinary lumbar, inguino-crural, or even posterior-crural incisions, according to the circumstances, if the suppuration has extended into any of these regions.

1887. *Warren on Cancer of the Breast.*—The *Boston Medical and Surgical Journal* of April 11, 1889, contains an interesting paper on the diagnosis and treatment of cancer of the breast, read by Dr. Collins Warren before the Boston Gynecological Society. The author who, ten years ago, had become discouraged through the bad results of operative interference in cases of mammary cancer, writes here in support of the bold and radical measures advocated in recent years by Küster, Mitchell Banks, and other surgeons. It is held to be important to collect abundant statistical information on the results of such treatment, in order to be in a position to deal with those who are not disposed to look upon the so-called 'completed operation' with much favour. When cancer can be recognised at an early stage, and the diagnosis is promptly followed up by an operation thorough in character and practised according to the most exacting standard and with the full benefits of the antiseptic system, then, Dr. Warren thinks, the very unfavourable prognosis now generally accorded to the disease will have to be materially modified. One of the most important points to be considered in any instance of difficult diagnosis is that of age. The earliest age at which cancer of the breast has been observed is twenty-one, but in very few cases has this organ been attacked before the age of twenty-five. With regard to locality Dr. Warren, guided by general impressions, would be inclined to agree with the deductions made from Gross's statistics, that cancer is seated more frequently in the upper than in the lower hemisphere of the breast, and it is more likely also to be found near the axillary than near its sternal margin. With regard to the influence of heredity, it is thought that an undoubted record of the prevalence of cancer would have considerable weight in enabling the surgeon to make a diagnosis in a doubtful case, but usually there is much difficulty in obtaining reliable information on this point. All the external appearances of cancer of the breast, including even dimpling of the skin, may, it is asserted, be simulated by inflammation. Retraction of the nipple is considered to be a misleading symptom, as it is not unfrequently found in breasts that are quite healthy. Dr. Warren describes an instrument which he uses in very doubtful cases of mammary swelling in an early stage. This consists in a small canula sharpened on the inner edge, by means of which a section of tissue of ample dimensions for microscopic examination can be taken from the interior of the growth. After the canula has been thrust through the skin to the extent of from half-an-inch to two inches, it is withdrawn for a short distance and then directed inwards again in a line slightly oblique to the direction it had first taken. By rotating the canula as it is passed in this new direction, the cylindrical mass of tissue contained within the canula will be divided and can be removed from the tumour. Dr. Warren holds with those who believe in the purely local origin of cancer, and points out that the steadily diminishing size of the cancerous deposits in the direction from the periphery towards the centre of the lymphatic system, together with the analogy between the manifestations of this and other forms of disease whose local origin is well recognised, so strongly suggest a local origin that it is difficult in the light of modern pathology to accept any other interpretation. In the removal of a cancerous breast, great importance is now attached to careful dissection of the fascia from the pectoral muscle, as it is in this tissue that capillary lymphatics are concealed which furnish hiding-places for the outposts of the disease. The lower border of the muscle should be well freed from fat and connective tissue, and also from the fascia which covers in the axilla. The so-called 'completed operation' is acknowledged to be far more severe than any of the older methods of removing cancer of the breast. Of 85 cases, however, in which this operation was performed—in 53 by Gross, in 32 by the author—2 only were fatal. In conclusion, Dr. Warren states that it seems fair to assume that a mortality of 3 per cent. is not too much to hope for in future, and that we may expect to find in the statistics of the next few years that surgery has succeeded in accomplishing a cure in 20 per cent. of the cases.

1888. *Powers on Kocher's Method of reducing Subcoracoid Dislocation of the Humerus.*—In the *New York Medical Record*, March 30, 1889, Dr. Charles A. Powers, of New York, advocates in the treatment of every recent case of subcoracoid dislocation the employment of Kocher's method, which he believes to be the most logical, scientific, and successful plan that has hitherto been devised for the reduction of this displacement. Kocher's procedure, in which the patient is seated, Powers proposes to amend by placing him on his back, with both shoulders resting on a firm table, and by having the opposite shoulder held down, as there is a great tendency for the patient's body to be turned to the affected side during the external rotation of the arm. The following conclusions are given at the end of this paper. 1. Of the various luxations of the head of the humerus the subcoracoid is much the most common. 2. The method to be employed in its reduction is, *par excellence*, that of Kocher, which should be applied in every recent case. 3. This procedure is logical and safe, and may be easily and rapidly carried out. Its careful, accurate, and thorough employment will almost invariably insure success at the first attempt. 4. It will not succeed in those cases, happily uncommon, in which the capsular ligament is severely torn. 5. The patient should be placed in the dorsal position. 6. It is attended with the least possible pain to the patient, and an anæsthetic is unnecessary. 7. It is practically without danger to the important vessels and nerves. 8. The question as to whether its success depends on the integrity of the anterior or of the posterior part of the capsule must yet be considered *sub judice*. 9. It rarely succeeds in the subglenoid form. 10. It is applicable to the intracoracoid cases, but in these the elbow should be placed behind the posterior axillary line and external rotation should be maintained for two or three minutes. 11. In every case in which much resistance is met with during the early part of the second movement the position of external rotation should be steadily maintained for a short period before bringing the arm forward and across the chest.

1889. *Nélaton on Irreducible Luxations of the Hip.*—An original memoir by Dr. C. Nélaton on the Causes of Irreducibility of Old Luxations of the Hip (*Archives Générales de Médecine*, April 1889) is concluded by the following brief review :—'Irreducibility of old luxations of the hip is due to : (*a*) deformities of the cotyloid cavity; (*b*) changes in the capsular ligament; (*c*) contractile shortening of muscles (glutei adductors). More or less marked deformities of the cotyloid cavity are of constant occurrence in cases in which the luxation has existed for twelve months. The obstacles on the part of the capsule are : (*a*) the interposition of this ligament between the head of the femur and the cotyloid cavity; (*b*) cicatricial constriction of the rent traversed by the head of the femur; (*c*) the presence of a fibrous septum formed by the displaced capsule, which is adherent to the elevated and rounded border of the acetabulum, and covers this cavity. The records of cases of old luxation of the hip show that this displacement becomes irreducible after it has lasted for one year. Luxation of the hip may usually be reduced in the course of the first two months after the date of the injury, but after this period the chances of effecting reduction become much reduced. The reduction of old luxations of the hip by bloodless methods necessitates the employment of much force. If such methods fail to effect reduction the surgeon may have recourse to arthrotomy. This operation should be performed, if possible, before the expiration of three months from the date of injury, and the anterior incision should be practised. If circumstances have prevented the surgeon from intervening before the end of the third month, he should resolve at once to perform resection of the head of the femur. Osteotomy would seem to be suitable to those cases only in which there is extreme flexion of the limb and immobility of the displaced head of the femur.'

1890. *Bryant on Simultaneous Ligature of both External Carotids in Cases of Naso-Pharyngeal Growth.*—In a paper read last March before the New York Surgical Society, and published in the *New York Med. Jour.*, May 11, Dr. Joseph D. Bryant argues in favour of the following propositions :—Firstly, that simultaneous ligature of both external carotids is a rational preparatory measure for operations involving the parts supplied by the branches of these vessels when dangerous hæmorrhage is feared; in the second place, that simultaneous ligature may be advisable to diminish the rapidity of the development of extensive malignant growths when they are nourished by the branches of the external carotids. A case is reported of a large bleeding myxo-sarcoma attached to the basilar process of the occipital bone, to the posterior and left wall of the pharynx, also to the palate bone and the internal pterygoid plate of the sphenoid bone. The external carotids were ligatured simultaneously on June 19, 1888. At the end of the first week after this operation all pain had ceased, and the size of the tumour had diminished to such an extent that not only had the previous bulging of the palate caused by it disappeared, but the index finger could easily explore the dimensions and determine the attachments of the growth. On June 28 the left superior maxilla was removed with but very slight bleeding, but, for some unexplained reason, the tumour was not interfered with. Up to the time of the reading of Dr. Bryant's paper, the tumour had diminished slowly in size without treatment of any kind for three months. In conclusion the following reasons are given in favour of simultaneous double ligature of the external carotid artery before removal of a superior maxilla as a preliminary to a direct attack on a pharyngeal growth :—1. The loss of blood attending the preliminary act of removal of the superior maxilla will then be reduced to a minimum. 2. The amount of blood going to the pharyngeal growth will be temporarily reduced to a minimum at the same time by ligaturing the vessels that principally supply the structures from which it springs. 3. Ligature of both external carotids can be done quickly and without difficulty, and is not attended with any special danger to the patient. 4. Operations for removal of pharyngeal growths are attended by great mortality from the immediate loss of blood; hence the advisability of a step that lessens the loss of blood while it exposes the patient to no unusual danger. W. JOHNSON SMITH.

1891. *Casati on Three Cases of Traumatic Tetanus cured by Large Doses of Hydrochlorate of Pilocarpine in Hypodermic Injection.*—In the first case treatment was commenced by giving chloral and bromide of potassium, and chloral by intravenous injection. As the symptoms became aggravated all the contracted muscles were rubbed with belladonna ointment, three centigrammes of watery extract of opium every two hours, and a hypodermic injection of one centigramme of hydrochlorate of pilocarpine also every two hours. This treatment was continued for six days, all symptoms of tetanic contractions disappearing; the patient then became furiously delirious, and there was great diuresis. The delirium was attributed to the belladonna, and disappeared with paraldehyde. In the second case pilocarpine only was given, one centigramme in hypodermic injection every two hours. This was continued for eight days. The symptoms gradually disappeared, and the patient recovered. In the third case 70 centigrammes of pilocarpine were given in fifteen days. This case was a very severe one, but did well. Casati maintains that in all cases there is some solution of continuity to give access to the infective element of tetanus, and that this infective agent is identical in all forms of the disease.

1892. *Ruggi on Laparotomies performed in the Last Year.*—In the sixth congress of the *Società Chirurgica Italiana*, Bologna, April 1889, Professor Ruggi gave the following statistics of the laparotomies performed by him in the past year. In the last congress held at Naples he communicated his first 100 cases, since then in 11 months he has performed laparotomy 60 times; of these 160 cases 115 were treated with sublimate dressings. 1. Oöphorectomy with salpingectomy, 10 cases, 10 cures; 2. Oöphorectomy, 21 cases, 21 cures; 3. Contraction for various reasons, 14 cases, 14 cures; 4. Salpingectomy, 5 cases, 4 cures, 1 death; 5. Periuterine fibromyoma, 4 cases, 4 cures; 6. Supravaginal amputation of the uterus, 24 cases, 19 cures, 5 deaths; 7, Laparohysterotomy for cavity sarcoma, 1 case, 1 death; 8. Hysterectomy, author's method, 3 cases, 3 cures; 9. Cysts of parametrium, 2 cases, 1 cure, 1 death; 10. Endoabdominal fixation of uterus, author's method, 19 cases, 19 cures; 11. Ascites with peritoneal tuberculosis, 3 cases, 3 cures; 12. Echinococcus cysts in peritoneum and liver, 2 cases, 2 cures; 13. Exploratory laparotomies, 5 cases, 5 cures; 14. Evisceration, 1 case, 1 cure; 15. Laparotomy for foreign bodies, 1 case, 1 cure. Total, 115; 107 cures, 8 deaths.

G. D'ARCY ADAMS, M.D.

1893. *Richardson on Surgical Interference in Acute Intestinal Obstruction.*—In the *Asclepiad*, May 1889, p. 103, Dr. Richardson publishes an interesting paper on Surgical Interference in Acute Intestinal Obstruction, of which the following is the summary. 1. In all cases of acute intestinal obstruction the use of minor measures, such as purgatives, enemata, galvanic irritation, and massage, are, when judiciously used, correct up to the point of the appearance of vomiting of matter of a distinctly fæcal character. 2. So soon as this symptom is established there should be no hesitation in opening the abdomen for the exploration of the obstruction and the attempt at removing it. 3. Obscurity of diagnosis in regard to the seat and nature of the obstruction ought not, in the presence of this special symptom, to prevent the resort to surgical interference, because sometimes what is inferred to be a complicated obstruction turns out to be an extremely simple one; and, again, if the obstruction be complicate, it may admit of being relieved without any further serious danger to the patient than would arise from omitting the operation, since the greater the difficulty the more urgent is the demand for interference, and the more certain the death if surgical aid be not afforded. One point of practical diagnosis is specially referred to, viz., the inability of the sufferer to find relief by the passage of flatus *per anum*. This indicates that the seat of obstruction is either low down in the colon or above the colon altogether, and it tells that the occlusion is so perfect that even under strong pressure gases will not pass it, giving a mechanical proof of the clearest kind that nothing less than mechanical means will give relief.

RICHARD NEALE, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1894. WILLARD, DE FOREST, M.D., Ph.D. (Philadelphia).—Osteotomy for Anterior Curvatures of the Leg. (Read before the American Orthopædic Association, September 1888.)

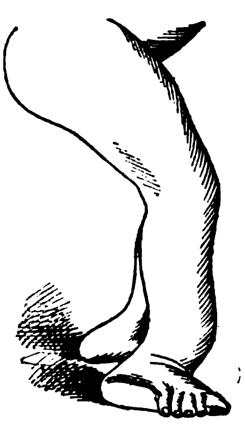
1895. JUDSON, DR. A. B.—The American Hip-Splint.

(Reprint from *Transactions of the Ninth International Medical Congress*, vol. iii.)

Art. 1894. *Willard on Osteotomy for Anterior Curvatures of the Leg.*—In this paper Dr. Willard describes three methods of straightening ricket-curved bones. 'I. *Manual Straightening and the Use of Apparatus.*—In the second and third years of life, if the bones are still either soft or springy, it is possible to correct the deformity by frequent manual straightening, provided the mother or nurse is willing to give the requisite time and patience to the case. The pressure should be as forcible as the integrity of the bone will permit. This will give the child pain for only a few moments after the force is removed. This pressure should be repeated many times daily. If gentle manual pressure could be constantly applied it would doubtless, as in club-foot, be perfectly curative. Instrumental pressure, made in the proper direction by spring power or by strap connected with steel uprights, may be employed in connection with manipulation during this stage.

'II. *Forcible Fracture.—A. By the Hands; B. By the Osteoclast. A. Manual Fracture.*—In children under three years of age by far the safest and best plan to be adopted is fracture of the two bones at the proper point, if the surgeon possesses the requisite strength. For additional power the knee may be used; or the child may be placed upon its face, and a very small sandbag or a wide roller bandage be used as a fulcrum. Frequently it is timidity rather than lack of strength that prevents success. Up to the point compatible with the life of the soft parts its great advantage lies in the fact that only a simple fracture is produced, and speedy union is the result. The objection to the plan lies in the inability of the surgeon to regulate exactly the point of fracture. The proper dressing after manual fracture is fixation, as described under Osteotomy. *B. Osteoclasis.*—The osteoclast, while a very efficient instrument in the thigh, yet in the leg has the great disadvantage that pressure must be made upon the sharp edge of the tibia, covered only by thin skin.

'III. *Osteotomy.—A. By Chisel.* 1. Simple; 2. Cuneiform. *B. By Saw.*—1. *Linear Osteotomy.*—In simple osteotomy an Esmarch bandage is not desirable, as the outflowing blood is of advantage in effectually preventing the entrance of air. In regard to the cases suitable for the simple cut, experience has taught me that even where the angle has been very prominent there is no necessity for taking out a wedge, as nature is abundantly able, provided no septic influence is introduced, to unite the bones solidly even if they were angularly placed.' Rules are given for rendering the parts aseptic both before and after operation. 'In children the fibula need not be touched, as it can be easily fractured; but in the sclerosed bones of lads or adults a separate section will be necessary.' 'Rectification being performed, section of the tendo Achillis is usually done with benefit, as it relieves much of the tension upon the parts, permits better adjustment, and reduces the tendency to future displacement.' '2. *Cuneiform Osteotomy.*—The removal of a wedge-shaped piece from the tibia is only necessary when the angle of curvature is very great, and especially when it approaches the right angle.' Here Esmarch's bandage should be used. 'Many surgeons fasten the ends of the bones with wire, silkworm-gut, kangaroo-tendon, &c.; but I see no necessity in the majority of cases for the delay, and for the additional incentive to suppuration. In angular mal-union following fracture, however,' he always uses 'the inter-osseous suture, as there is ordinarily a tendency to non-union.' Some figures illustrate the paper, and the author sums up the following conclusion:—'1. Anterior tibial curves during the soft and springy stages may be corrected by manual rectification and the use of apparatus. 2. Braces are useless after hardening has occurred. 3. Manual fracture is the best and safest remedial operation in young children. 4. Instrumental fracture, or osteoclasis, is not as safe or effective as osteotomy. 5. Aseptic simple osteotomy, for all moderate degrees of curve, and cuneiform section for very severe grades, give almost uniformly good and speedy results, without suppuration. Subcutaneous section by the saw is also a reliable operation. 6. Plaster-of-Paris is the simplest and most effective material for securing accurate position and maintaining absolute fixation. By its use the delay and injury incident to suturing the ends of the bones is avoided.'



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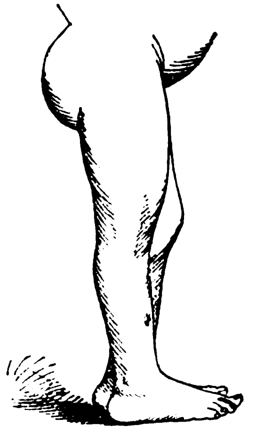

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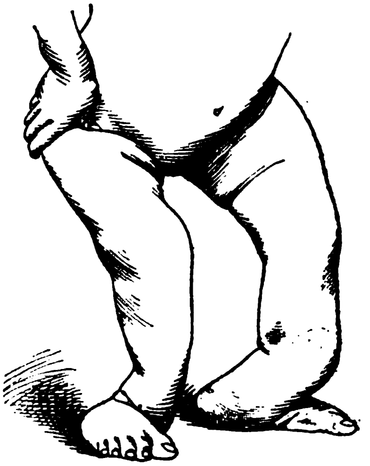

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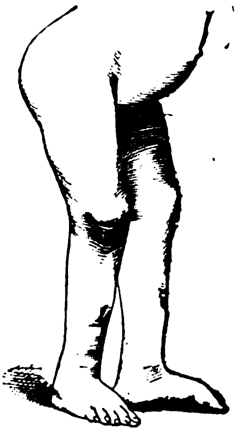
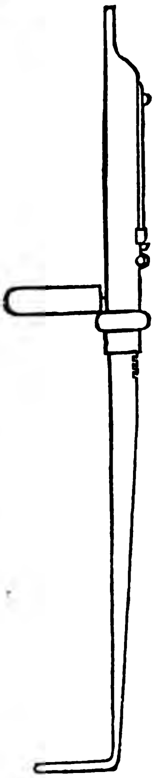
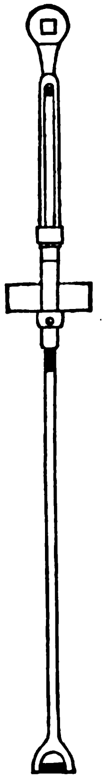


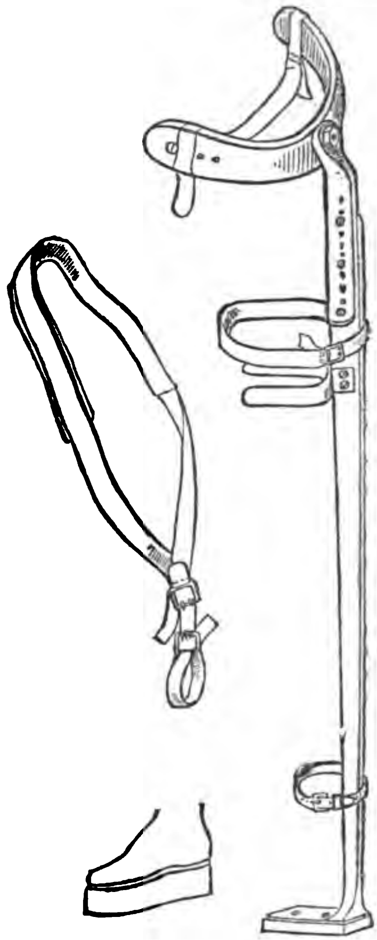
After Operation.

1895. *Judson on the American Hip-Splint.*—Dr. A. B. Judson, of New York, has published a reprint from the *Transactions of the Ninth International Medical Congress*, vol. iii., upon this splint, in which the following remarks sum up the principles of the apparatus. 'Following the history of the hip-splint in this country for the past twenty-seven years, one is amazed at the great number of the so-called improvements that have been made upon it. The most important has been a perfecting of that part of the apparatus which provides for ischiatic support of the body in standing and walking. The first splint did not extend to the ground, but depended on the integrity of the plaster adhesion from keeping the weight of the body from resting on the inflamed joint. Dr. Edmund Andrews, of Chicago, and Dr. C. Fayette Taylor, of New York, proposed and perfected an extension of the splint to the ground, and thus left but little to be desired as an ischiatic crutch. Aside from this great improvement, no essential changes have been made. Experience and increasing light have shown that certain things which it was thought that the splint accomplished are mechanically beyond its reach, and that some things supposed to be desirable and even necessary to proper mechanical treatment are of no importance whatever. The two things which the splint does to-day, and which it has done ever since the improvement above mentioned, the two functions of the splint, so to speak, are (1) to make the affected limb a pendent member, resembling in this respect the arm, when the patient is erect, which it does as an ischiatic crutch, and (2) to apply traction to the distal member of the joint, which it does by its rack and pinion and adhesive plaster. Traction protects the joint from the traumatism of motion, muscular or otherwise, and the ischiatic support protects it from the traumatisms of standing and walking, while the patient runs about and follows the ordinary pursuits of life for the months and years necessary to bring about a recovery with restoration of ability and symmetry, so far as may be.' I have found this splint useful in some cases. I had it made in exact imitation of one lent me by Dr. Virgil Gibney for the purpose.

Noble Smith.







MEDICINE.

RECENT PAPERS.

1896. Mallam.—On Delirium in Jaundice. (*Illustrated Med. News*, May 1889, p. 149.)

1897. Finlayson.—The Infective and the Incubation Period in Contagious Diseases. (*Glasgow Med. Jour.*, May 1889, p. 321.)

1898. Davidson.—On Genital Irritation in Boys. (*Practitioner*, May 1889, p. 350.)

1899. Alderson.—On a Case of Relapsing Typhlitis. (*Provincial Med. Jour.*, May 1889, p. 264.)

1900. Jones.—The Diagnosis and Treatment of Headaches. (*Practitioner*, May 1889, p. 336.)

1901. Ord.—The Diagnosis and Treatment of Gastric Ulcer. (*American Journal of the Medical Sciences*, June 1889, p. 549.)

1902. STIRLING. — On Plastic Bronchitis. (*Practitioner*, June 1889, p. 401.)

1903. MALAGOLA.—Drainage in Gangrene of the Lung. (*Rivista Clinica*, May 1889.)

1904. SEMMOLA, PROFESSOR M.—On the Curability of Hepatic Cirrhosis. (*Il Progresso Medico*, Nos. 1-7, 1889.)

1905. MONTEFUSCO, A.—Jaundice in Cholera. (*Giorn. Internaz. delle Scienze Med.*, An. x., fasc. 4.)

1906. DE RENZI, PROFESSOR E.—On the Treatment of Pulmonary Tuberculosis by Hot Air. (*Clinica Medica di Napoli*, No. 2, February 1889.)

1907. COLOMBI.—A Case of Nervous Vomiting cured by Hypnotism. (*Gazz. degli Ospitali*, March 31, 1889.)

1908. BULLARD, DR.—On Two Cases of Phthisis treated by Intra-pulmonary Injections. (*Boston Med. and Surg. Jour.*, May 9, 1889.)

1909. HUCHARD, M.—On 'Stokes-Adams' Disease. (*Rev. Gén. de Clin. et de Thérap.*, April 4, 1889.)

ART. 1896. *Mallam on Delirium in Jaundice.*—In the *Illustrated Med. News*, May 1889, p. 149, Mr. Mallam records the case of a married woman, aged 48 years, who was attacked with pain in the abdomen on Feb. 26, 1887. For two days she was kept under morphia, then bromide of potassium and chloral were given. There was much pain over the liver, which was increased in size, and there was pain over the right scapula; slight jaundice came on, and the tongue became dry and red. A few days later the jaundice became more marked and she complained of severe headache; delirium also set in. There was no bile in the fæces, and the urine was the colour of mahogany. The symptoms grew worse, and it was evident that there was obstruction of the common gall-duct. On March 28, Mr. Reeves was called in, but he did not think it a good case for operating, but on April 5 he was going to make an incision to explore the abdomen, when some bile was noticed in the stools and the operation was postponed. No more bile, however, was passed after this, and there was no improvement in the patient's condition. The delirium still persisted, but on the evening of April 15 she said she felt something go in her head, and her mind very soon became clear, after being more or less delirious for six weeks. On April 23 bile reappeared in the motions, and the patient made a quick recovery. This case is interesting in many ways—First, the long period of delirium caused great anxiety; and, secondly, it shows the value of placing some faith in waiting for nature to assert herself, instead of trusting to the risk of an operation.

1897. *Finlayson on the Infective and the Incubation Period in Contagious Diseases.*—In the *Glasgow Med. Jour.*, May 1889, p. 321, Dr. James Finlayson contributes a very interesting article, in which he has collected and tabulated the views of recent authorities on the infective and incubation period in contagious diseases. The author has drawn up three tables, one showing the various views of well-known authors as to the infective period, another showing the period of incubation, and a third showing the period of quarantine necessary to enforce in cases where the patient has been exposed to infection, before they should be allowed to be considered safe to mix with others. Some such rules are also required as to the time when it is safe to allow healthy children to return to school, if they have brothers or sisters suffering at home from infectious diseases, especially if they themselves have once had the disease. The infective period for scarlet fever is from seven to eight weeks; measles, three to four weeks; Rötheln rather less; mumps varies from two to four weeks, and whooping-cough is usually put down to eight weeks or more. The paper is a very instructive one, and every general practitioner would do well to keep a copy of it always ready for reference.

1898. *Davidson on Genital Irritation in Boys.* In the *Practitioner*, May 1889, p. 350, Mr. Davidson, M.B., comments on the frequent neglect shown by mothers and nurses in washing the genitals of young children. The child is certainly washed, but no special attention is taken of these organs. They are packed in diapers, so that fæcal and urinary discharges are preserved in accurate contact until a fœtor is noticed, and thus attention is drawn to the part. During infancy boys labour under greater physical disadvantages than girls. In boys the glans penis is covered by the prepuce, and the inevitable acid dyspepsia of infants with its acid urine sooner or later exerts its influence, and genital irritation occurs. The child seeks to relieve this irritation by tugging on the prepuce, and the continued pulling elongates it, its orifice contracts, and, finally, in severe cases the prepuce 'balloons out' during micturition, straining weakens the abdominal walls, and hernia may result. This continued habit of manipulating the genitals may last long after the irritation ceases, and if retained till puberty leads often to masturbation. In these cases early circumcision is essential, and even in youths who are found to practise masturbation there is nothing so likely to cure them as circumcision.

1899. *Alderson on a Case of Relapsing Typhlitis.* In the *Prov. Med. Jour.*, May 1889, p. 264, Dr. Alderson records an interesting case of typhlitis. In July 1886 the author attended a lad of 14 for a slight gastric feverish attack, which lasted for about a fortnight, when he was well enough to return to school. Early in August, however, he was found suffering from the same symptoms, but much more severe and resembling typhoid fever. After watching the case for ten days there appeared distinct tenderness over the cæcum. By August 16 there was every sign of peritonitis, with a prominent distension of the right iliac fossa. On August 17 the author decided to aspirate the swelling in the right side, and drew off more than a pint of very offensive pus. This gave the boy great relief for a time, but two days later nearly another pint was drawn off with the aspirator, so that on the 21st Dr. Alderson decided to open the abscess with a knife, and insert a large drainage-tube. The abscess was washed out night and morning with carbolised hot water, and afterwards injected with weak solution of tincture of iodine, and later on with sulphate of zinc or nitrate of silver. After making the incision there was never any rise of temperature, and the boy made a good recovery. On September 12 he went away to the seaside, and on his returning, after a month, the wound was perfectly healed, but there existed an inguinal hernia at the seat of the old abscess; this was relieved by wearing a truss.

1900. *Jones on the Diagnosis and Treatment of Headaches.*—In the *Practitioner*, May 1889, p. 336, Mr. Lloyd Jones, M.B., makes some interesting observations on the treatment of headaches, accompanied by diminished or increased blood-pressure. Remembering that it had been shown by Kronecker that during the act of sipping the pulse was accelerated, the author made observations on about

200 cases of headache, in which he ordered the patients to try the effect of sipping cold water. He found that during the act there was an acceleration of the pulse, due to the abolition of the normal vagus, inhibition of the heart, together with a temporary rise in the blood-pressure. As soon as the sipping was discontinued, the original pulse rate returned, and then became slower, so that finally the pulse was slowed by the act of sipping. During this period the blood-pressure also falls, and frequently becomes lower than it was when the sipping was commenced. The volume of blood in circulation is increased, and thereby for a time is caused an increase of blood-pressure, generally most marked about half an hour after consumption of the water; usually a tumblerful is sufficient to produce this. These points are of great importance in relation to the effects of sipping upon headache. In persons with *low-pressure* headache the primary effect is relief during the act of sipping; the secondary is to aggravate or to cause it to return during a short period, commencing about a quarter or half a minute after sipping; and, if enough water be taken, the tertiary effect is sometimes observed, cure or relief about half an hour later. Among patients suffering from *high-pressure* headaches a very few were relieved by sipping cold water, while, as a rule, the headache was aggravated or remained unaltered. The author then goes on to show how to treat these two types. First, with regard to the *low-pressure* headaches. In acute, or toxic, cases, as from alcohol and tobacco, exercise and food are potent remedies. Relief is also obtained from cardiac stimulants, such as spirit. ammoniæ aromatici ʒss., antipyrine (in small doses). In acute *high-pressure* headaches the bowels must be kept open, but not purged; nitrite of amyl in a very dilute state is exceedingly valuable. In recurrent high-pressure headaches alkalies are very beneficial, and if there be any anæmia iron is also required.

1901. *Ord on the Diagnosis and Treatment of Gastric Ulcer.*—In the *American Journal of the Medical Sciences*, June 1889, p. 549, Dr. William Ord contributes a most interesting article on the diagnosis and treatment of gastric ulcer. Two definite forms are noticed:—(1) The deep perforating ulcer, most frequently found in young women; (2) the comparatively shallow ulcer, with raised or overhanging edges, irregular outline, and uneven surface, which is observed in middle-aged persons of both sexes. In diagnosing gastric ulcer from acute or chronic gastritis it is very important to notice the character of the vomiting, as this is a symptom in all three. In acute gastritis it is constant, and irrespective of food; in chronic gastritis it is usually some time after taking food; and in cases of ulcer it gives a marked relief to the pain which is not noticed when there is any gastritis. Mucus, occurring in the vomit of ulcer, will generally indicate the existence of chronic gastritis. The real test to diagnose gastric ulcer from malignant disease is the presence or absence of tumour; and if no tumour can be detected after careful examination of the epigastrium it is advisable to treat the case as non-malignant, no matter how severe the case may seem. Dr. Ord enters very strongly into the method of treating these cases, and the first thing he insists upon is absolute physical rest. In private practice this is hard to obtain, and it is a well-known fact that hospital patients recover sooner from gastric ulcer than private patients, because the former are compelled to keep at rest, but the latter are very troublesome unless they are under the control of a good nurse. The next important question is physiological rest. All experience shows that, in relation to the comfort of the patient, meats, uncooked food of all kinds, all mechanical indigestibles, and stimulants must be forbidden. After this large exclusion, idiosyncrasies of the patient have to be considered; some can take milk and eggs, and soft farinaceous food—these cases do not call for anxiety. The author does not like using any of the various kinds of nutrient suppositories, lately so much vaunted; but prefers the fluid enema to be given, consisting of 4 ounces to 6 ounces of beef-tea and milk in equal proportions, with a drachm of Benger's 'liquor pancreaticus,' at a temperature of about 98° F. In cases of gastric ulcer without gastric catarrh, it is good to give 20 grains of carbonate of bismuth with 10 grains of carbonate of soda and 10 drops of tincture of belladonna three times a day. If there be marked signs of gastric catarrh it is best to give 10 grains of bicarbonate of potash, 3 grains of iodide of potassium, and 3 drops of dilute hydrocyanic acid in infusion of gentian, three times a day. The use of iodide of potassium in cases of gastric catarrh cannot be over-estimated; it speedily removes a simple catarrh, and is in this way most useful in cases of gastric ulcer. In cases of malignant disease it often mitigates the symptoms for a time.

1902. *Stirling on Plastic Bronchitis.*—In the *Practitioner*, June 1889, p. 401, Dr. Stirling describes a case of chronic plastic bronchitis. The patient was a dock labourer, aged 30. About nine years previously his voice began to be hoarse, in consequence of constantly shouting at his work, but otherwise he never suffered from any illness. In December 1888 the patient was attacked by a spasmodic cough, and brought up pieces of a white substance, often tinged with blood; after this had gone on for about a week he consulted the author, who examined his chest, and the following conditions were noted:—Chest symmetrical, expansion movements exceedingly slight all over; fremitus normal; percussion impaired behind at bases; elsewhere it lacks fulness. Breath-sounds practically inaudible over both front and back; intense hollow blowing over the vertebræ above the level of the scapular spine. In the lower third of the left lung, front and back, friction-like sounds at the end of inspiration, which posteriorly were broken up, and there resembled very thick creaking râles. These physical signs are typical of a chronic case of plastic bronchitis. The cough was considerably eased by giving an expectorant mixture of carbonate of ammonia, squill, and senega, and in a few days the expectoration took the form of casts of large portions of the bronchial tree. After about two months' treatment at home it was found that he was unable to work, and was therefore admitted into Charing Cross Hospital for about two weeks, when he returned home and resumed work, but the formation of the casts still went on, though during the day the cough was not troublesome, but at night it was very troublesome when he was lying down. No treatment had any effect in preventing the formation of the false membrane, but the following prescription was for a time beneficial in enabling the patient to expectorate freely:—Potass. iodid., gr. iij.; pot. bicarb., gr. xv.; ammon. carb., gr. iv.;

vin. antim., ♏ v.; aq. ad ℥j.; to be given every 4 hours. The prognosis of these chronic cases is always doubtful, though complete recovery may take place after years of suffering.

RICHARD NEALE, M.D.

1903. *Malagola on Drainage in Gangrene of the Lung.*—A patient was admitted with intermittent fever, symptoms of gangrene of the lung supervening. As the patient was getting worse and no treatment was of any avail, intra-pulmonary injections of various antiseptics were tried. The patient's state, however, became daily worse, and Dr. Montalti determined to introduce a drainage-tube into the lung. Dr. Malagola made the incision in the intercostal space immediately under the right nipple. The drainage-tube, 2 millimètres in diameter, was introduced for 5 centimètres, and every three hours it was washed out with a 5 per cent. solution of carbolic acid. As this caused violent cough and vomiting, sublimate solution, ½ per 1,000, was substituted. This was well borne and caused but little cough. The improvement was immediate, all the severe respiratory and circulatory phenomena diminished rapidly, and the general health of the patient rapidly gained. The drainage-tube after the fourth day showed a tendency to be expelled; it was gradually shortened, and taken out finally on the nineteenth day. The patient was admitted on June 29, and left the hospital quite well on Sept. 15. There was distinct falling in of the chest-wall on the operated side between the clavicle and nipple.

1904. *Semmola on the Curability of Hepatic Cirrhosis.*—The etiology of hepatic cirrhosis, if generally due to alcoholism or malarial infection, is still sometimes unknown. The most frequent cause is concentrated alcohol, most hurtful when taken on an empty stomach, as it is then most quickly absorbed. The veins which carry it from the stomach become irritated, and the irritation, extending from the portal veins, engenders an inflammatory process of the perivascular connective tissue, which, little by little, leads to hepatic sclerosis. As long as the hepatic lesion is limited to an embryonal neoformation, although extensive, Semmola affirms that a good result is to be hoped from a rigorous milk diet. When, however, the atrophic process has become complete, the advantage obtained from milk diet can only be palliative. Clinical symptoms do not always tell us with which stage we have to deal; ascites, not being only determined by a mechanical cause, may be great, while the cirrhosis is still curable. On the other hand, there are cases of cirrhosis with no ascites at all up to the end. As an aliment milk entails the least work for the stomach, satisfies the needs of the general nutrition. The irritated gastric mucous membrane is the first to feel the good effect, and this is propagated to the other parts of the digestive tract, with its annexes, liver, &c. Not only is milk easily digestible, but it furnishes peptones, which facilitate tissue change, and thus milk diet increases the quantity of urea eliminated in the 24 hours. In all these ways, and by increased diuresis, rigid milk diet tends to improve the morbid conditions proper to hepatic cirrhosis.

1905. *Montefusco on Jaundice in Cholera.*—The author gives the clinical history of five cases in which jaundice occurred. The secretion of bile in cholera is not suppressed. All pathologists agree that on *post mortem* of cholera patients the gall-bladder is full of bile more or less dense, and sometimes with almost solid particles: impediment to the excretion of bile occurs, and not suppressed secretion. Namias explains this fact by the presence of spasmodic contractions of that part of the intestine which is in relation with ductus choledochus: Ceci, by a permanent contraction of the ductus choledochus. Nunez-Vais holds that in cholera there is acholia, but this is not confirmed by autopsy. A clinical fact, which shows that the secretion of bile is not suppressed, is that often the diarrhœa maintains a yellow or greenish colour even in typical cases. We have evidently to do with jaundice from reabsorption, from mechanical obstacle to the flow of the bile, represented by spasm of the ductus choledochus. Why, with a constant impediment to the excretion of the bile, jaundice does not occur more frequently, is the most difficult fact to explain. Possibly, especially in those cases in which there is great loss of liquid, the watery part of the bile only is reabsorbed, the deposit of solid particles remaining, which is often found *post mortem*. It may also be admitted that the bile continues to be secreted, but not in so great quantity that reabsorption can take place in the short time the attack of cholera lasts. The influence of jaundice on the course of the disease appears to be *nil*.

1906. *De Renzi on the Treatment of Pulmonary Tuberculosis by Hot Air.*—Among recent methods of treatment is that of Worms and Krull, of inhalations of hot or cold air. The tubercle-bacillus being able to flourish only between restricted limits of temperature, the idea naturally occurs that its development may be prevented by raising or lowering the temperature of the inspired air above or below those limits. Worms recommends cold air; Krull has tried inhalations of hot air. Professor De Renzi also prefers the second, chiefly because the required temperature is more easily obtained with inhalations of hot air. The hot air is obtained from a strongly-heated spiral tube; before reaching the mouth of the patient it passes through a tube in which is placed a thermometer indicating exactly the temperature of the air inhaled. A special metallic mask is used for the face, and a layer of cotton is placed between the mask and the skin. He has treated eight patients in advanced phthisis in this manner; three were distinctly benefited. The inspired air, to exert a marked effect, must be very hot; no effect is obtained with inhalations of air at the temperature of 43° or 46° C., such as Krull uses. This is not sufficient to modify sensibly the state of the tissues infected by the tubercle-bacillus. Air heated to between 80° and 160° C. is very well borne by the patients. The mask becomes hot and burns the skin, but if this is avoided by carefully padding, air at the temperature indicated is tolerated without difficulty. In one patient inhalations at 180° C. caused no discomfort. The temperature he recommends as most convenient and best borne is from 140° to 160° C. The duration of each inhalation is from fifteen minutes to one hour. One patient had hæmoptysis during treatment, but he had often had it before. All the patients so treated felt better and stronger, and wished to continue the treatment. In some the weight of the body increased, and the quantity of the bacilli in the sputa sensibly diminished. The pace of the heart and respiration is quickened by the inspiration of the hot air, and the general temperature of the body is raised, but all subside as soon as the inhalation is over.

1907. *Colombi on a Case of Nervous Vomiting cured by Hypnotism.*—Girl of 12 had suffered for a month with dyspeptic neurasthenia with vomiting directly after every meal. During all this time she was unusually irritable and weak. As she did not improve under treatment hypnotism was tried. The child was told to look fixedly at a luminous object. After a long time evident hypnotic drowsiness was obtained, if not sleep. Colombi then tried suggestion, commanding her to ask at midnight for ham, and to eat it without being sick. The child did nothing of the sort, but passed the night and following day in a state of restlessness and irritability greater than usual. On the second evening the hypnotic sleep was obtained more easily. (The luminous object stared at was the bulb of a clinical thermometer.) The same command was given her as the night before. The child woke precisely at midnight, asked for ham, ate a good meal, and then slept quietly for the rest of the night. On visiting her next day Colombi found she had had two good meals without sickness. Twelve days later the improvement is marked: the child eats and digests well, and has lost her irritability. She was only hypnotised twice. G. D'Arcy Adams, M.D.

1908. *Bullard on Two Cases of Phthisis treated by Intra-pulmonary Injections.*—Up to the present time the author has treated five cases of pulmonary disease by intra-pulmonary injections. In the first case there were loud bubbling râles, high-pitched bronchial respiration, and the ordinary signs of a cavity with fever, night-sweat, and profuse expectoration. The local physical signs, as well as the general condition of the patient, improved greatly as soon as the intra-pulmonary treatment was commenced. Within forty-eight hours after the first injection the very loud, coarse, bubbling râles had disappeared, being replaced by finer subcrepitant râles, and the respiration was lower in pitch and less bronchial in character. After several injections the subcrepitant râles became much less numerous, and finally disappeared to a great extent. Another patient was in an advanced stage of tubercular phthisis, and an injection was made in the neighbourhood of a supposed cavity, in the hope of relief rather than cure. This hope was justified, and the patient was much more comfortable after the injection than he had been previously, the amount of sputa diminishing and the general condition being bettered, but the progress of the disease was not hindered, nor even probably delayed. The physical signs were, however, not materially changed. The author concludes that there are clearly many cases in which this mode of treatment may be safely and easily applied, with the effect of diminishing the symptoms of active disease, of benefiting the patient's condition, and of prolonging and possibly of saving life.

1909. *Huchard on 'Stokes-Adams' Disease.*—This disease, the manifestations of which are a permanently slow pulse with syncopal and epileptiform attacks, is, according to the author, a 'cardio-bulbar arterio-sclerosis' with which renal arterio-sclerosis may be associated. He has observed three of these cases, and the most benefit was derived from the iodides, nitrite of amyl during the attacks, and nitroglycerine. In urgent cases he recommends that the nitroglycerine (trinitrine) should be given hypodermically. When the heart shows signs of failing, caffein should be prescribed, and if uræmic symptoms supervene a milk diet should be rigidly adhered to. The therapeutical indications are:—(1) to lower the arterial blood-pressure, (2) to combat the cerebral ischæmia by hyperæmiants, and (3) to assist the heart by the administration of cardiac tonics.

Alfred S. Gubb.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1910. De Tullio.—Inverted Peristalsis in Hysterical Women. (*Gazz. degli Ospitali*, May 26, 1889.)

1911. Tordens, Dr.—On a Case of Amniotic Umbilicus. (*La Clinique*, June 6, 1889.)

1912. Bernardy, Dr.—On a Case of Extra-uterine Pregnancy. (*Obstet. Gaz.*, May 1889.)

1913. Terrier, M.—On a Case of Peritonitis due to the Passage of the Constant Current in a Patient with Double Salpingitis. (*Bull. Méd.*, July 7, 1889.)

1914. Nicaise, Dr.—On the Electrolvtic Treatment of Uterine Fibroids. (*Bull. Méd.*, June 26, 1889.)

1915. Lucas-Championnière, Dr.—On the Electrical Treatment of Uterine Fibromata. (*Bull Méd.*, June 9, 1889.)

1916. Thomson, Dr. H. (Dorpat).—Experimental Researches to ascertain the Best Material for Suture in Intraperitoneal Operations, especially in reference to the Uterine Suture in Cæsarean Section. (*Centralbl. für Gynäk.*, June 15, 1889.)

Art. 1910. *De Tullio on Inverted Peristalsis in Hysterical Women.*—Case 1, a woman married 7 years without children, aged 29; commenced at 18 to suffer from convulsive attacks without loss of consciousness, vomiting repeated at every menstruation, continued till marriage. Afterwards, from mental trouble, she had an attack of hysteria and uncontrollable vomiting. She suffered from amenorrhœa and dysmenorrhœa. When given a soap and water enema she vomited it after 15 minutes! This Dr. Tullio witnessed. She entirely recovered after local treatment to the uterus. The second case was a girl, aged 15, who had not yet menstruated. She was hysterical, and had pains in the abdomen and constipation. Whenever she was given an enema of oil, she vomited up, formed blackish, hard, stercoraceous matter. She asserted that she had had no action by the bowel for 6 weeks. The abdomen was distended, painful to pressure and tense. The oil enemata were persisted in and the fæcal matter in the vomit gradually diminished and the bowel resumed its normal function.

G. D'Arcy Adams, M.D.

1911. *Tordens on a Case of Amniotic Umbilicus.*—Professor Widerhof describes as 'amniotic umbilicus' a developmental defect characterised by the absence of skin around the umbilicus and its replacement by the sheath of the cord. This defect is extremely rare, and in no wise hinders the functions and development of the infant. Dr. Tordens relates one such case which came under his observation on June 20, 1888. Labour, on the preceding day, had been normal, and the infant had been sent for examination, by the nurse, who had diagnosed an umbilical hernia. The umbilical cord had been tied and severed at a distance of 2½ inches from the parietes. The sheath of the cord, instead of becoming continuous with the skin at the margin of the ring, became dilated and was inserted into the umbilical region over an area which measured about 2½ inches in diameter. It presented the appearance of a little placenta, seen on the fœtal side. The child presented no trace of any other deformity. During the next few days the stump of the cord underwent the usual retrogressive changes, and a margin of inflammation was noticed at the line of junction of the amnion with the skin of the abdominal parietes. Little by little the amniotic disc underwent the same changes as the cord; it became dry, and collapsed. The borders became loosened, and it, together with the cord, was thrown off on the ninth day. There remained on a level with the umbilicus an open wound, which rapidly cicatrised, and was quite healed fifty days after birth. The only trace at present visible is a white radiate cicatrix, the size of a sixpenny-piece.

1912. *Bernardy on a Case of Extra-uterine Pregnancy.*—On November 15, 1888, Dr. Bernardy was called to a patient who had been suddenly seized with a sharp agonising pain on the left side of the abdomen. She was blanched, cold, and pulseless. The menses had been arrested since September 13, 1888. Diagnosis: rupture of extra-uterine pregnancy. The patient was 34 years of age, had had several children previously, and there was an obscure history of gonorrhœal infection. Vaginal examination revealed the presence of a large and tender tumour on the left side and to the back of the uterus. From the 18th to the 25th the acute symptoms subsided to some extent. On December 10 a large mass, looking like the after-birth, was expelled from the vagina, and the least movement brought back the pain. Ultimately abdominal section was performed on December 29, 1888, and a ruptured left tubal pregnancy was discovered, surrounded by adhesions. The right tube was also distended, and was removed with the rest. The patient made a good recovery, without a bad symptom.

1913. *Terrier on a Case of Peritonitis due to the Passage of the Constant Current in a Patient with Double Salpingitis.*—A year since the author was called to a woman in whom the presence of abdominal tumours could be made out which, after some hesitation, were diagnosed to be uterine fibromata. M. Terrier, however, doubted the accuracy of this diagnosis, and, acting in the belief that it was a case of double salpingitis, warned the patient that only an operation would relieve her. Disregarding his advice she resorted to the electrical treatment, which promptly determined a severe attack of acute peritonitis. The patient, however, survived, but the salpingites had obviously increased in size, and the matting of the intestines could be felt in one spot through the abdominal parietes.

1914. *Nicaise on the Electrolytic Treatment of Uterine Fibroids.*—In a paper read by M. Nicaise before the Paris Société de Chirurgie, he concludes, from a study of the recorded cases in which the electric current has been employed in the treatment of fibroid tumours of the uterus, that the moment has not yet arrived when a definite opinion can be formed as to its value, but he said that it might be taken as proved that the cauterisation of the endometrium by the electrode often brought about the disappearance of dangerous symptoms, notably of hæmorrhage. In the discussion which followed, M. Terrillon mentioned that he had employed this method in only 7 out of 113 cases of uterine fibroid. In one of these seven the patient had a tender and hæmorrhagic fibroid jammed in the pelvis, and the sound passed 11 centimètres into the uterus. He tried to remove this by laparotomy, but failed, and he then resorted to electric currents of medium strength. On the following day septicæmia supervened, and killed the patient. At the autopsy the tumour was found to be suppurating. Another patient, aged 60, suffered from occasional floodings, due to the presence of a fibroid. The last hæmorrhage was checked by plugging the vagina, after which electrolysis was employed, and no more bleeding occurred. He was, however, uncertain whether the electricity had brought about the cure. A third patient derived no benefit whatever from the treatment. In the four other cases he himself applied the current; in one the effect was *nil*, after twenty *séances* with a current strength of 120 milliampères; and, in another, twenty-two *séances* did not modify the symptoms nor arrest the hæmorrhage. The third did no better, with fifty applications. In the fourth the hæmorrhage ceased for a while, but recurred within five weeks after the suspension of the treatment. On the whole, he was of opinion that in certain cases electrolysis might diminish hæmorrhage and assuage pain, but the method is not exempt from risk, and requires to be employed with prudence. M. Lucas-Championnière said that the treatment might prove useful to arrest hæmorrhage due to fibroids in women near the menopause, especially if only low-tension currents were employed, the beneficial effects of which are as marked as when stronger currents are resorted to. He insisted upon the fact that the use of a reversed current was much more likely to do good than a stronger constant current. He denied energetically that the tumour could ever be made to disappear by any such means.

1915. *Lucas-Championnière on the Electrical Treatment of Uterine Fibromata.*—The author is of opinion that when uterine fibromata give rise to metrorrhagia or severe pain in young women the proper treatment is removal of the appendages; if the tumour be of large size, then hysterectomy or ovariotomy is indicated. In other cases, when the patients are near the menopause, when the symptoms are not unduly severe, or when the tumour is inaccessible, the electrical treatment is indicated. In seven cases in which the method was employed the results were satisfactory. Metrorrhagia promptly ceased, and the general condition of the patient improved, together with marked improvement in the pain and discomfort to which these tumours gave rise. The size of the tumour is usually rapidly reduced, but this he attributes, not to any real diminution in volume, but to 'decongestion' and the absorption of inflammatory exudations. He prefers to use a current not exceeding from 40 to 60 milliampères, and the *séances* last from four to ten minutes. In particular cases it may be necessary to go as far as 90 milliampères. He has never met with any mishaps, and the patients were always able to return home unaided. He insists upon the practical importance of frequently reversing the current. He regards the treatment as palliative rather than curative, and he considers the tediousness of the treatment as a distinct drawback. He urged that it was wrong to expose the patient to the risk of using the stronger currents when all the benefit of which the method is capable can be obtained by using currents of moderate strength, frequently reversed.

Alfred S. Gubb.

1916. *Thomson on Sutures in Abdominal Section and the Cæsarean Operation.*—After carefully sterilising samples of carbolised gut, chromic gut, silk, and silkworm gut, of similar thickness, Dr. Thomson made use of these materials in the following manner. Rabbits, cats, and dogs that had just given birth to young were selected, and an incision was made in the cornu of the uterus on each side in each case. The incision was closed by suture, different material being used on opposite cornua. Sutures were also applied to the omentum and abdominal wound, in order to ascertain if they were there subject to more or less rapid changes than the sutures in recently pregnant uterine tissue. No difference could, however, be detected in this respect. The animals subjected to experiment were killed at different intervals of time, the sutures being carefully inspected. The carbolised catgut sutures were found to be very thin in the subjects killed at the end of a week, and reduced to mere relics in the neighbourhood of the knots at the end of ten days. Chromic gut remained absolutely unaltered even at the termination of sixty-four days. The cut ends were more or less covered in by membrane. Silk ligatures were found loosened, yet entire, at the end of fourteen days. Nothing but scanty relics of this material remained at the end of sixty-four days. At the termination of the same period silkworm gut was found absolutely unchanged, the still sharp-cut ends of the sutures made of this material projecting freely into the peritoneal cavity. Dr. Thomson concludes that silk is the best and safest material for suture, particularly for the uterine wound in Cæsarean section. Chromic and silkworm gut, as well as silver, are bad materials, as they never undergo absorption; whilst, on the other hand, carbolised gut becomes absorbed too early.

ALBAN DORAN.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

1917. RICHARDSON.—A Case of Poisoning by the Smoke of Tobacco. (*Asclepiad*, May 1889, p. 132.)

1918. PEDICINI.—A Family of Five poisoned by Stramonium. (*Il Prog. Med.*, No. 5, March 1889.)

1919. WHITTY, J. A.—Snake-bite successfully treated. (*Brit. Med. Jour.*, June 1.)

1920. REID, H. A.—A Case of Poisoning by Arsenic absorbed by the Skin. (*Australian Med. Jour.*, April 15, 1889.)

1921. MAUS, MERVIN.—A Case of Prolonged Gestation. (*New York Med. Jour.*, May 11, 1889.)

1922. RANDALL, ALEX., M.D.—Cocaine Poisoning from Intranasal Application. (*Univ. Med. Magazine*, April 1889.)

1923. HARE, H. A., M.D.—The Value of Soluble Sulphates in Creosote Poisoning. (*Univ. Med. Magazine*, April 1889.)

1924. CAREY, WILLIAM A., M.D.—Alarming Symptoms following the Use of Hydrobromate of Hyoscine. (*Univ. Med. Mag.*, April 1889.)

1925. CLENDENEN, FLOYD.—A Case of Spontaneous Combustion. (*Therapeutic Gazette*, June 15, 1889.)

1926. SHRADY.—On Signs of the Moribund Condition. (*New York Med. Record*, June 8, 1889.)

1927. CHITTICK.—A Fatal Case of Ptomaine Poisoning. (*American Lancet*, June 1889.)

ART. 1917. *Richardson on a Case of Poisoning by the Smoke of Tobacco.*—In the *Asclepiad*, May 1889, p. 132, Dr. Richardson relates the following case. A gentleman, about 35 years of age, small but well built, and of active habits, was very much worried with business affairs. He returned home from town one evening extremely fatigued, took a very slight meal, smoked several cigars and cigarettes, and retired to bed. He was very restless all night, and early next morning went off to his office; he dictated some letters, and, declining all food, began smoking cigars again. He continued this process of smoking and dictating during the greater portion of the day, taking nothing but a little brandy and water. In less than twelve hours he smoked forty cigarettes, and fourteen large, full-flavoured cigars. As the evening advanced he became prostrate and excited, refusing food. Next morning he was seen by the author, who found him in a state of continuous muscular tremor, with loss of muscular power of the lower extremities. The pupils were widely dilated, and the tongue was dry; the skin was cool, clammy, and perspiring; the pulse soft, full, and feeble. All further smoking was prohibited, and fluid nourishment was ordered to be given freely, with small quantities of alcohol. As the day advanced he grew more and more unconscious, the muscular paralysis increased and extended to the arms, every now and then there was a faint general convulsion, and the breathing became noisy and embarrassed. In the evening the symptoms became rapidly worse, and death took place, evidently from asphyxia from accumulation of fluid in the bronchial tubes. The symptoms were undoubtedly due to nicotine poisoning, and, as there is no known antidote to this, there was nothing to be done but to keep up the patient's strength by nourishment and stimulants. If the author met with a similar case he adds that he would try the effect of transfusion of blood, but in this instance he did not think of it at the time.

RICHARD NEALE, M.D.

1918. *Pedicini on a Family of Five poisoned by Stramonium.*—A lady having a cough, and three of her children bad colds, made a strong decoction of stramonium leaves which her husband smoked for asthma, as a cure. The two eldest children were twins, 4 or 5 years of age, the youngest a baby in arms. A servant also took some of the decoction. After seven or eight minutes all showed signs of poisoning, the twins first. They staggered and fell unconscious; the servant complained of giddiness, and laughed in an uncontrollable manner and lost consciousness; the lady did the same, but was able first to call help. Pedicini, on arriving, found all the sufferers unconscious and delirious, their pupils widely dilated. He sums up the symptoms thus:—1. Giddiness so great as to cause the patient to fall. 2. Rapid invasion of ridiculous illusions and hallucinations. 3. Progressive dulness of consciousness, stupor or semi-stupor. In children the psychical phenomena are more marked, exaggerated spinal activity, tetanus. 4. In cases of medium intensity symptoms last fifteen to twenty hours or more, with dysphagia, anuria, mydriasis, heart's action hurried and depressed. 5. Subcomatose stage with improvement of heart's action, pupils contracting. If the dose of poison was large this passes into true coma with extreme mydriasis. They all recovered. Treatment—Caffein hypodermically in large doses to combat the cardiac collapse. Morphia for the cerebral and convulsive symptoms. Hot black coffee. Copious enemata of spirits of camphor in water. G. D'Arcy Adams, M.D.

1919. *Whitty on Snake-bite successfully treated.*—A gentleman was bitten on the dorsum of the second phalanx of the right index finger by a puff adder measuring 3 feet in length. In ten minutes a tourniquet was applied, and the patient was directed to suck the wound. Dr. Whitty then made a deep incision in the direction of the wound, and applied lin. camph. co. to the wound, having no ammonia at hand. After this the hand was placed in hot water to which permanganate of potash had been added. Internally, brandy, 2 oz., and a mixture containing amm. carb. 3 gr., sp. ammon. arom. ʒj., æth. sulph. 20 ♏ in water, were given alternately, at intervals of ten minutes, until four doses of each had been taken. About twenty minutes after being bitten the patient fainted, but soon recovered, and then became restless and delirious. The hand and arm were now much swollen and brawny, the wounded finger was black and felt icy cold, the pulse was full 100; but as time went on it fell to 84 and became weaker, a sort of coma vigil set in, and the patient made a champing noise with his tongue. Brandy, 1 oz., was given every half-hour, and the pulse began to improve. Subsequently the patient became more collapsed again, and vomited whilst a dose of the ether mixture was being given; he then had 2 oz. of brandy and went to sleep. He slept for about three hours, and after that was practically out of danger; but all through the next day he was very weak, and suffered much from vomiting. A large bleb formed at the site of the bite and discharged about an ounce of sanious pus.

1920. *Reid on a Case of Poisoning by Arsenic absorbed by the Skin.*—Dr. Reid reports the following interesting case. A girl, aged 18, was seized with pains in the abdomen and nausea. Four days later Dr. Reid saw her. Her condition then was: face pale, expression anxious, frontal headache, heat and constriction of fauces, slight vertigo, muscular pains down the limbs, shivering, small pulse, severe retching, cold extremities, frequent diarrrhœa, and some cramps in the abdomen; there was peculiar vomit of a bluish colour. He noticed that her hands were stained of a similar colour to the vomit, and he learnt that she was engaged in learning dressmaking, and that her hands were stained from working at a 'black linen' which was used for lining ladies' dresses. Under appropriate treatment the patient gradually recovered. The vomit was found to contain arsenite of copper, and this was also proved to exist in the black linen'; no other source of arsenical poisoning could be discovered, and Dr. Reid invites discussion as to whether poisonous dyes can be absorbed through the skin of the hands of those working with material containing them, or whether they are absorbed by the respiratory organs from the particles of dust given off from the material. We may point out that it is impossible in such a case as this to disprove the latter theory, but at the same time we have no doubt whatever that enough of the poison might be absorbed through the skin as suggested to give rise to poisonous symptoms.

1921. *Maus on a Case of Prolonged Gestation.*—A case in which gestation is alleged to have been prolonged for 334 days must be worth notice, even though we do not feel assured of all the facts. We are not told whether the woman in this case had given birth to children before or not, but her catamenia commenced on May 13, lasted four days, and did not reappear. In the following June she suffered from morning sickness, and quickened between Sept. 17 and 24. Her confinement was calculated for the latter end of February, but did not take place until April 14, a period of 334 days, reckoning by either Montgomery's or Matthews Duncan's process of calculation. We would rather believe that the woman was mistaken as to her sensations in regard to the quickening in September than that the period of gestation can exceed its normal duration by a time equivalent to one-fifth of the whole period.

1922. *Randall on a Case of Cocaine Poisoning from Intranasal Application.*—The subject of this communication was a little boy, aged 6, whose nares were much occluded by swelling of the turbinals. A pledget of cotton-wool dipped in a 4 per cent. solution of cocaine was applied on each side, the application being subsequently repeated. Ten minutes after leaving he became unable to walk, and Dr. Randall was speedily summoned. He found the child delirious, with some hallucinations, pupils widely dilated, face flushed, and with marked tremor and some subsultus; the delirium persisted for some hours, and he then fell asleep and was practically well the next morning.

1923. *Hare on the Value of Soluble Sulphates in Creosote Poisoning.*—In a short paper, Dr. Hare briefly records the results obtained in an experimental inquiry into the action of soluble sulphates as antidotes to creosote. The question is one of considerable importance at the present time, owing to the extensive use by the public of beechwood creosote in cases of phthisis. In every instance where magnesium sulphate was given the symptoms of poisoning were modified or almost entirely set aside; these experiments also showed that beechwood creosote is not nearly so poisonous as carbolic acid. The conclusion is that in creosote poisoning any of the soluble sulphates should at once be given in excess.

1924. *Carey on Alarming Symptoms following the Use of Hydrobromate of Hyoscine.*—The patient in this case was the reporter, who took hyosc. hydrobrom. gr. $\frac{1}{100}$, with a view to getting to sleep one evening about 9 P.M. Finding no other effects than a slight dryness of the mouth and throat, he repeated the dose at 11.15 P.M. The dryness of the mouth increased, the lower extremities began to twitch and jerk, until in about a quarter of an hour general muscular tremors were developed. His vision was impaired, and he then tried to take some mustard and water as an emetic, but deglutition was very difficult; a kind of mild delirium supervened, from which he was partly aroused by being made to walk up and down the room several times, after which he recognised the friend who had been summoned to treat him. Apomorphia, gr. $\frac{1}{10}$, was given hypodermically, but failed to produce vomiting. He was intensely anxious to be left undisturbed; it was too much exertion to him to speak, and he lacked energy to oppose, even by a word, interference which was irritating; he felt as if a heavy pressure was being exerted upon him, making it impossible for him to stand. He had visual delusions, and from one to five o'clock was very restless, but had no recollection afterwards of anything that had happened during this period. From five to eight o'clock he dosed, and then awoke with his mind clear; the dryness of the throat had passed off, but his pupils did not fully recover for a few days; he felt pains in his arms and legs for a few days, and felt generally weak and indisposed for exertion the first day; his memory, too, was faulty for this day. Dr. Carey concludes his paper with a brief reference to a case of typhoid fever in which gr. $\frac{1}{98}$ was given for sleeplessness; in half an hour the patient was delirious, with dilated pupils, a fluttering pulse, and cold extremities, and, despite all efforts, she never rallied and died shortly afterwards.

1925. *Clendenen on a Case of Spontaneous Combustion.* — Dr. Clendenen reports the following instance of supposed spontaneous combustion, which he investigated in his capacity of coroner. The first thing that attracted attention was the peculiar sickening odour which pervaded everything in and about the farmhouse where the accident occurred. The inner walls of the house and the furniture were heavily coated with a dirty, greasy, sooty substance. The house had been in the occupation of an aged Irish couple, both addicted to the excessive use of whisky, and an old Swede, who was almost imbecile. On entering the house he found the husband lying dead on the floor by his bed, adjoining the kitchen, his room door being ajar. In the kitchen the furniture was all in its usual place, and the evidence showed that the kitchen fire had gone out on the previous evening at eight o'clock. About eight feet from the kitchen range there was a hole in the floor about 2 feet 6 inches by 3 feet, the earth being about 2 feet beneath, and here a mass of cinders was found which proved to contain a human skull, the cervical and upper dorsal vertebræ nearly reduced to a cinder, about 6 inches of the right femur. The feet were found in the shoes; the left foot was reduced to a cinder, the shoe being partially calcined; the other foot and shoe were reduced to a complete cinder. The clothing was entirely gone. The entire remains weighed 12 lbs. The woman during life had weighed 160 lbs. She was last seen alive at eight the previous evening, and was then in a state of intoxication, having drunk a quart of whisky that day. The pine joists, against which the remaining cinders lay, were slightly charred, but not burning when found. There was no evidence of a blaze having occurred.

1926. *Shrady on Signs of the Moribund Condition.*—In a paper read before the New York County Medical Association Dr. Shrady arrives at the following conclusions respecting the moribund condition:—1. In general the signs of death that are most trustworthy appeal to the eye. 2. Among these the respiratory function holds the first rank, both in cases of coma and asthenia; more noticeably when the two modes of death are blended. 3. The death by coma represents in duration the longest period. 4. The most valuable sign of inevitable dissolution is the up-and-down movement of the pomum Adami, always providing that it be persistent. 5. Temperature changes deserve recognition particularly when the curves are sharp, high, and continuous, or when they are below the normal. 6. An intermittent pulse is an early sign of death, especially when not due to any disturbed action of the nervous system. The qualification necessary to save this statement from being absolute lies in the fact that occasionally individuals are found who maintain this peculiarity through a long healthful life. 7. Deaths from syncope are too sudden to allow of much observation or study.

1927. *Chittick on a Fatal Case of Ptomaine Poisoning.*—Dr. Chittick read before the Detroit Academy of Medicine an account of a case of which the following is a brief summary. His patient, a girl, aged 14, well developed and healthy, was taken with vomiting one afternoon, about four hours after partaking of some fat pork. When he saw her twenty-four hours later there had been almost constant vomiting and purging, and the girl was in a state of extreme restlessness, though hardly conscious of what was said to her. She did not seem to suffer pain; her face was pinched and lips drawn; her breathing was of the Cheyne-Stokes type; pulse at the wrist could hardly be made out, but the heart was beating 140 a minute. Next morning she was worse, skin cold and clammy, some rise of temperature, and abdominal tenderness, and she died in the course of the day. Dr. Chittick suggests that she had taken more fat than could be digested, and that the surplus underwent decomposition, giving rise to the development of ptomaines; others had eaten the pork, but none in the same quantity.

BACTERIOLOGY AND PARASITIC DISEASES.

RECENT PAPERS.

1928. Baracz.—On a Case of Actinomycosis in a Human Being. (*Med.-Chir. Centralblatt*, No. 17, 1889.)

1929. Loesch, Professor Fedor A.—On Pseudo-actinomycosis. (*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, 1889, No. 10, p. 316.)

1930. Leblanc, Dr.—On the Etiology of Tetanus. (*Rev. Gén. de Clin. et de Thérap.*, April 25, 1889.)

1931. Lannois, Dr.—On 'Black Tongue.' (*La Clinique*, April 18, 1889.)

1932. Macleod, N., M.D., and Milles, W. J., F.R.C.S. On the Causation of Asiatic Cholera. (*Labour Reports, R.C.P.Ed.*, 1888.)

1933. Manfredi.—The Present State of the Question of Bacterio-therapy. (*Giornale Internaz. delle Scienze Mediche*, Fasc. 1, 1889.)

1934. Gabbi, U.—New and Rapid Method of Staining the Capsule of the Pneumo-bacillus of Fränkel. (*Riforma Medica*, February 1889, No. 31.)

1935. Di Mattei, E.—On the Communicability of Tuberculosis by Means of the Sweat of Phthisical Patients. (*Arch. per le Scienze Mediche*, Vol. xii., Fasc. iii., 1888.)

1936. Fetresco, Z.—The Contagion of Tuberculosis by Sputa. (*Bulletin de la Société des Médecins et des Naturalistes de Jassy. Jassy. Imprimerie Nationale.* 1888.)

1937. Summa, Hugo, M.D.—On the Pseudo-Parasitism of Diptera in Man. (*St. Louis Med. and Surg. Jour.*, No. 581, May 1889.)

Art. 1928. *Baracz on a Case of Actinomycosis in a Human Being.*—Dr. Roman von Baracz reports three such cases in the *Med.-Chir. Centralblatt.* The following is the third. A woman aged 30 years, and married for seven years, had ten years ago a dental fistula which, after extraction of the diseased tooth, healed up, leaving a small cicatrix on the right cheek. Four weeks before the doctor saw her, lock-jaw set in, a bluish-red spot appearing with considerable swelling of the right cheek above the alveolar process of the right lower jaw. This swelling increased from day to day and then went down again. The patient could only with great pain open her mouth half a centimètre wide. The dentist had removed the roots of two molar teeth from the right lower jaw, whereupon the swelling went down and the lock-jaw ceased, but an abscess formed on the above-named spot. Baracz found in the subcutaneous tissue of the right cheek in the middle of the right alveolar process of the lower jaw an abscess of the size of a pea, which distinctly fluctuated, its skin being reddened and thin. There was no thickening on the alveolar process. All the molar teeth of the right lower jaw were gone. The other teeth were sound, and the internal organs normal. The woman had a strong beard, and shaved or pulled out the hairs with a pincette. An incision of the abscess was not allowed by the patient, but bandages with Burow's solution were ordered. Two days later the patient came again, and, as the abscess was larger in spite of the bandaging, she submitted to the incision. Under cocaine anæsthesia the abscess was cut open, and cleaned with a sharp spoon. It contained a mucous purulent fluid and some small lemon-coloured lumps which awakened strong suspicion of actinomycosis. The cavity of the abscess was irrigated with 5 per cent. carbolic water and sublimate solution (1 to 1,000), and bandaged with iodoform. The microscopic examination of the lumps two hours after excision showed numerous isolated conidia and actinomycetes. The little wound healed in a week, leaving but a slight cicatrix. The patient lives in a healthy part of the town and has nothing to do with animals, but stables and hay-lofts are near her dwelling. After examining the house Baracz formed the following hypotheses with regard to the manner of infection. 1. Flies seem to have been the bearers of the fungus from the stables. As the patient often pulled the hairs out of her face, the flies may have deposited the spores in the holes thus made. 2. The fungus may have found entrance during breathing, for opposite the patient's house were hay-lofts that were frequently opened for ventilation. 3. Lastly, the fungi may have got into the rain-water the patient washed in, stored as it was in a cistern in the yard. No fungus could be observed on the walls of the house. This case belongs to the slight acute class. The patient was cured in three months. John Elliott.

1929. *Loesch on Pseudo-actinomycosis.*—Professor Fedor A. Loesch, of Kiev, states (*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, 1889, No. 10, p. 316) that, having examined microscopically the sputa in thirty-seven successive cases of pulmonary disease, in seven of them he found peculiar colourless or yellowish bodies which at first glance fairly closely resembled actinomycotic grains both in their morphological features and behaviour towards chemical reagents. The discharge likewise contained tubercle-bacilli and elastic fibres. A more minute examination, however, proved that the grains (bearing terminal 'clubs') were nothing else than crystalline concretions ot some chemical substance allied to leucin. As Professor M. I. Afanasieff, of St. Petersburg, points out, Loesch's pseudo-actinomycotic grains may be easily differentiated from the genuine ones, since (1) the former are comparatively very small (only 0·06 millimètre in diameter); (2) they consist only of club-shaped inflations arranged in the form of an asterisk, but do not present any central filamentary structure; (3) on compression between two coverglasses, the bodies are converted into a shapeless detritus, while a genuine actinomycotic grain breaks into a bundle of dichotomising threads. According to Dr. N. A. Stroganoff, of Odessa, Loesch's grains (at least, the colourless ones) represent a product of degeneration of the tubercle-microbe, which has been described recently by Professor I. I. Metchnikoff. A case of pseudo-actinomycosis has been lately seen also by Dr. A. I. Viltchür, of St. Petersburg. It refers to a man who was expectorating a profuse blood-stained sputum; the latter, however, did not contain any tubercle-bacilli. V. Idelson, M.D.

1930. *Leblanc on the Etiology of Tetanus.*—M. Leblanc contested the views advanced by M. Verneuil. He urged that if tetanus were as contagious and as inoculable as had been claimed veterinary surgeons would be exposed to ever-present risk of contracting the disease. He quoted the observations communicated by M. Roux, (1) that tetanus has been met with on board ship where there were no horses, and in countries where the animal is unknown; (2) that the disease is common in India, where horses are scarce, especially in the country; moreover, the disease is particularly prevalent in districts and villages where there have never been any horses; (3) that tetanus frequently results from wounds inflicted by tigers' claws or alligator bites; (4) that tetanus is often observed among the Indians after hypodermic injections of sulphate of quinine, and is less frequent when the lactate of quinine is employed instead of the sulphate. Further, tetanus is very rare among the 13,000 omnibus horses in Paris, although absolutely no precautions are taken to prevent it spreading. He insisted upon imperfect sanitation and climatic conditions as factors in the production of the disease, in support of which contention he quoted many of the very cases produced by M. Verneuil. He concludes that the bacterial origin of tetanus is still far from proved, and transmission of the disease doubtful.

1931. *Lannois on 'Black Tongue.'*—This affection is usually painless, and the most that is complained of is some dryness of the throat. Usually mere chance leads to the discovery, at about the middle third of the dorsum of the tongue, of a patch about an inch in diameter, resembling 'a field of wheat when, after a violent storm, the blades, wetted and thrown down by the rain, are grouped together in thick tufts, prostrate, and crossing each other in every direction.' These tufts are composed of hypertrophied papillæ, and the coloration is due to the fact that each filament is invested by a sheath of a cinder-grey colour, in which one can distinguish under the microscope small corpuscles to which the colour is due. The author has had three such cases under observation, one in a girl suffering from sub-occipital Potts' disease, the second in ataxia of long standing, and the third in a man exhausted by chronic dysentery. He points out that opinions differ as to the precise nature of this affection; according to some authorities it is a simple trophic lesion, while others describe it as a filiform epithelial hypertrophy. The author, however, inclines to the view that the epithelial hypertrophy is proximately due to the irritation caused by the presence of a microbe or fungus. He therefore describes it as 'a local derangement of nutrition (from nervous disease or general affection), creating a suitable field for the operations of micro-organisms, which are the determining cause of the papillary hypertrophy and of the brown coloration.'

Alfred S. Gubb.

1932. *Macleod and Milles on the Causation of Asiatic Cholera.*—1. The comma-bacillus of Koch is invariably present, and associated with certain changes in the small intestine, in cases of Asiatic cholera. 2. There is no evidence to show that it is a normal inhabitant of the human alimentary canal, and, therefore, no proof for the assertion that it is a result of the disease. 3. The means used to introduce the comma-bacillus into, and those used to lessen the peristalsis of, the small intestine of the guinea-pig cannot be regarded as causing appearances like those of Asiatic cholera, or as causing the death of the animal, far less a mortality of over 60 per cent. 4. Pure cultivations of the comma-bacillus, introduced into the stomach under the precautions described, are pathogenic to the guinea-pig. 5. Injected with similar precautions, the contents of the ileum from those animals killed by injections of pure cultivations of the bacilli act in the same manner as pure cultivations of that organism. 6. The organism multiplies in the small intestine of the animal, and there are associated therewith changes similar to those in man in Asiatic cholera. 7. As there are conditions which favour the passage alive of the bacillus through the stomach of the guinea-pig; and also conditions which favour its multiplication in the small intestine of that animal; so in man, as there cannot be a doubt that the organism finds conditions favourable to its multiplication in his small intestine, it must have found conditions favourable to its entrance alive, through, in all probability, the mouth and stomach. 8. There is strong probability, therefore, for regarding the comma-bacillus of Koch as the cause of Asiatic cholera.

Bertram C. A. Windle, M.A., M.D.

1933. *Manfredi on the Present State of the Question of Bacterio-therapy.*—In Fasc. 1 of the *Giornale Internaz. delle Scienze Mediche*, 1889, is an interesting and thoughtful paper by Dr. L. Manfredi on 'Bacterio-therapy, or the Treatment of Certain Diseases by the Action of Bacteria.' He summarises the argument in the following general propositions:—1. The scientific basis of bacterio-therapy rests on the antagonism between bacteria, and principally on two clearly demonstrated facts: (*a*) that a nutritive field in which a bacterium has lived may become refractory to a new invasion of other bacteria or of the same; (*b*) that in certain conditions of existence some micro-organisms are constantly the antagonists of others. 2. The future of bacterio-therapy depends on the knowledge of the conditions in which the bacterial antagonism occurs. The problem is most difficult, because it is found that the least alterations of physico-chemical influences are sufficient to alter enormously the course and result of the struggle between the bacteria. 3. Bacterial treatment has assumed two forms, the form of bacterial prophylaxis and the form of bacterio-therapy. The first, crowned by grand successes and generalised for many infective diseases of animals, has entered with antirabic prophylaxis into the domain of treatment in men. The second, experimentally demonstrated in animals, awaits yet the verdict of clinical experience to sanction its application to men. 4. A special case of bacterio-therapy in man, still under discussion, is the antagonism between the bacterium termo and the tubercle-bacillus in the interior of the organism. Examining the facts adduced for and against, it must be acknowledged that the question of the therapeutic action of bacterium termo in pulmonary tuberculosis is still undecided. 5. Researches on the conference of immunity by means of soluble substances formed by the vital activity of bacteria explain what may be in certain cases the mechanism of bacterio-therapy, and show how great a future may be destined to this extraordinary method.

1934. *Gabbi on a New and Rapid Method of staining the Capsule of the Pneumo-bacillus of Fränkel.*—In 100 grammes of distilled water are dissolved 5 grammes of carbolic acid; to this are added 15 grammes of absolute alcohol. In the liquid thus prepared 1 gramme of fuchsin is dissolved; then filter. Violet of gentian or methyl-violet may be used instead, but do not give as good results as the fuchsin. The pneumonic sputum or the exudation to be examined is spread thinly on a glass slide and dried rapidly over a spirit lamp. Two or three drops of the solution are then allowed to fall on it, and to remain for some seconds to a minute. Then wash with distilled water gently, so as not to diminish the coloration too much, and the slide is then ready for examination. The diplococcus is well coloured deep red, and the capsule red; more or less clear according to the time employed in washing the preparation. If the washing is too prolonged, the coloration of the capsule disappears. It is deepest when the exposure to the colouring fluid is long and the washing very short. In those points of the slide where the sputum is thick the coccus only is stained, and the capsule remains colourless, but its outline is very distinct. With this simple process, Gabbi says, he has been able to show the presence of Fränkel's pneumo-bacillus in the purulent exudation of peritonitis or pleuritis, complicating genuine croupous pneumonia.

1935. *Di Mattei on the Communicability of Tuberculosis by Means of the Sweat of Phthisical Patients.*—Di Mattei finds that in the sweat collected without any special precaution from the skin tubercle-bacilli may be present, and that the tubercular infection may be produced in animals either by cultivation of the bacillus or directly by the sweat. But in the sweat collected after washing and the use of proper antiseptics tubercle-bacilli are not found, and cultivations made with it remain sterile; inoculations in animals also give no result. Specific bacilli, therefore, are not eliminated by the skin. G. D'Arcy Adams, M.D.

1936. *Petresco on the Contagion of Tuberculosis by Sputa.*—Professor Z. Petresco, of Bucharest, communicated to the International Congress for the Study of Tuberculosis in Paris, 1888, some observations on this subject, founded on work carried out at the laboratory for microbiology under his direction. He is in complete accord with most authorities on the subject as to the part played by the sputa of tuberculous persons as the chief if not the sole carriers of the contagious material, in whatever form it may be conveyed. He believes also in the frequency of auto-infection whereby the alimentary tract may become affected secondarily to the disease in the air passages. His experiments, the details of which are not described, were for the most part limited to the inoculation of rabbits and guinea-pigs with properly sterilised fluids into which the sputum of tuberculous persons had been introduced. The success attending his observations does not appear to have been remarkable, as the characteristic positive results were only obtained in 10 per cent. of the cases. This he attributes to the resisting power of the individuals inoculated, and he offers suggestions that this resisting power might be materially assisted if the sputa could be disinfected *in situ*, before its expectoration. As a means towards this end he advocates the use of a form of inhaler to be used as a matter of routine by all persons who are liable to expectoration, which ensures not only that all the respired air shall pass through some disinfecting material, but that it shall also pass through a layer of cotton-wool, and so be subject to filtration. Of the means already suggested for wholesale disinfection of the tissues, such as injections of antiseptic fluids subcutaneously and the distension of the rectum with antiseptic gases, he speaks with scorn, believing them to be either too painful or too disgusting for ordinary employment. The antiseptic fluids which he would advocate are for the most part those in general use, eucalyptol, creosote, iodoform, &c., and he suggests that months and years must be devoted to the treatment. He records no clinical statistics in support of his views, which appear to have been somewhat roughly handled in debate by the members of the Congress at which they were presented.

E. Clifford Beale, M.B.

1937. *Summa on the Pseudo-Parasitism of Diptera in Man.*—Dr. Summa has come to the conclusion that in the causation of myiosis or fly-disease there exist some differences both as to the manner of invasion of the dipterous larvæ into the human body, and as to the occurrence of certain genera of the dipteric order in the different forms of the disease. His hypothesis is as follows:—Firstly, myiosis vulnerum, narium, aurium, et conjunctivæ, is always produced by different species of sarcophagineæ and muscidæ, both genera being sometimes comprised under the term creophila or flesh-flies. Secondly, myiosis intestinalis is always caused by various species of the genus anthomyidæ or flower flies. And, thirdly, the cause of this distribution is based upon the fact that, whilst the members of the sarcophagineæ and muscidæ lay their larvæ on every animal structure, or nutritive material derived from the animal kingdom, subject to the laws of decomposition, and directly invade natural cavities of the human body with badly-smelling discharges, the different species of anthomyidæ only indirectly enter the human body—*i.e.* pass into the digestive canal by means of spoiled food. All of the reported cases of the disease in America have so far supported the author's conclusions, as he has been unable to find a single case in which the myiosis intestinalis was caused by any other dipterous larva than by species of anthomyidæ, but that all the other forms of myiosis were produced by various species of flesh-flies. As an appendix, as it were, to his paper, the author gives an account of two cases of fly-disease, one observed by his brother, Dr. Henry Summa, and the other by himself. Such cases are sufficiently uncommon to deserve an epitome here. Case I.—Myiosis narium, caused by the invasion of the larvæ of the common bluebottle. The patient was a gardener, aged 28, who had suffered for some time from nasal obstruction, fœtor, and occasional bloody discharge from his nose. In mid-July, 1888, after dinner, he lay down under a tree for an hour's rest. Six or seven days afterwards he began to feel an itching high up in his nose, which finally developed into pain, at first confined to the nose, afterwards radiating to the forehead and latterly to the entire head. At this time the patient became aware of worms falling down his nose three to four at once, and amounting on the sixth day to a few hundred. There was high fever, temperature 102° F., pulse 96, severe epistaxis, and vomiting. After treatment by irrigation with solution of perchloride of mercury ($\frac{1}{2000}$) twice a day for five days, the disease was relieved, and on the eighth day the patient was convalescent. Case II.—Myiosis narium, caused by the invasion of the larvæ of the common flesh-fly.—Patient was a well-built man, aged 34, who consulted Dr. Summa on Sept. 14, 1888, complaining of severe headache, insomnia, anorexia and constipation; nose and surrounding parts, especially on the left side, were swollen and of an erysipelatous appearance; an offensive smell from the nostrils. Next day, when the diagnosis of myiosis narium was made, on examining the patient's mouth an ovoid-shaped hole was found in the palate. In the depth of the hole a numberless quantity of maggots could be seen and partially removed with a forceps; a sero-sanguineous discharge from the hole; a most dreadful stench from the mouth. Patient was treated by injections of a 5 per cent. solution of carbolic acid, and recovered in about a fortnight. The history of the case was to the effect that the patient had suffered from ozæna for a long time, and that he went fishing and hunting in Illinois in the latter days of August and passed a few nights out of doors. Some days afterwards the symptoms of the nasal affection increased to such an extent that he was obliged to seek medical advice.

Vincent D. Harris, M.D.

ANATOMY.

RECENT PAPERS.

1938. Hartmann, H.—On Nervous Anastomoses (*Etude de quelques anastomoses elliptiques des nerfs du membre supérieur*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 151.)

1939. Gilis, P.—On the Inter-Maxillary Bones (*Os inter-maxillaire quadruple*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 372.)

1940. Sebileau, P.—On the Cervical Fasciæ of the Thyroid Body (*Note sur les aponévroses du cou, &c.*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 463.)

1941. Valat, M.—On Imperforate Anus, &c. (*Imperforation de l'anus avec atrophie du sacrum et absence du coccyx*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 497.)

1942. Debierre, M.—On Genito-Urinary Anomalies (*Anomalies des organes génito-urinaires*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 511.)

1943. Popow, Professor W.—On Ectopia Testis (*Ectopie testiculaire péno-pubienne antérieure*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 655.)

1944. Achard, Dr. C.—On Partial Duplicity of the Central Canal of the Spinal Cord (*Sur une anomalie de la moelle épinière: duplicité partielle du canal central*). (*Bull. de la Soc. Anat. de Paris*, 1888, p. 922.)

1945. Potherat and Mordret.—On Ectopia of the Kidneys (*Ectopie congénitale des deux reins*). (*Bull. de la Soc. Anat. de Paris*, 1889, p. 124.)

1946. Hart, D. B., M.D., and Carter, J. T., F.R.C.S.E.—On the Sectional Anatomy of Advanced Extra-uterine Gestation. (*Lab. Reps. R.C.P.Edin.*, vol. i., p. 25.)

1947. Raon, E.—On the Development of the Diaphragm (*Ueber die Bildung der Scheidewand zwischen Brust und Bauchhöhle in Säugethierembryonen*). (*Arch. für Anat. u. Entwick.*, Jahrg. 1889, Heft 3, V. 4, S. 123.)

1948. Poirier and Retterer.—On Bronchial Cartilages (*Cartilage bronchial bilatéral et symétrique*). (*Bull. de la Soc. Anat. de Paris*, 1889, p. 338.)

1949. GRIFFITHS, J., M.B., C.M.—Observations on the Anatomy of the Prostate. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 374.)

1950. REID, R. W., F.R.C.S.—On the Relations between the Superficial Origins of the Spinal Nerves from the Spinal Cord and the Spinous Processes of the Vertebræ.

1951. LOCKWOOD, C. B., F.R.C.S.—On an Abnormality of the Fissure of Rolando. (*Proceedings of the Anat. Soc. of Great Britain and Ireland, Jour. of Anat. and Phys.*, vol. xxiii., p. 16.)

1952. SIEBENMANN, F.—On the Canals of the Internal Ear (*Ueb. die Injection der Knochenkanäle des Aquæductus Vestibuli et Cochleæ mit Wood'schem Metall*). (*Mittheil. aus dem Anat. Inst. im Vesal, zu Basel*, 672.)

1953. KOLLMANN, PROF. J. — On Hyperdaktyly (*Handskeleit und Hyperdaktylie*). (*Mittheil. aus dem Anat. Inst. im Vesal, zu Basel*, 604.)

1954. VITI, PROFESSOR (Sienna).—Persistence of the Omphalo-mesenteric Duct. (*Act. d. Accad. R. dei Fisio Critici*, Sienna, 1887, Ser. iii. Vol. iv.; and *Centralbl. f. Gynäk.*, No. 16, 1889.)

1955. VIGNARD, DR. E.—Rhabdomyo-sarcoma of Striated Muscular Tumour of the Ovary. (*Bulletins de la Soc. Anat. de Paris*, Janvier 1889, 2e fascicule.)

ART. 1938. *Hartmann on Nervous Anastomoses.*—Dealing with anomalies of the musculo-cutaneous, median, and other nerves of the upper extremity, the author arrives at the following conclusions:—1. The nervous fibres are by no means so constant in their course as has generally been supposed. 2. As in the case of the arterial system the blood may pass to a given part through an unusual channel, so nerve fibres may run in a neighbouring nerve-trunk, to rejoin the fellow branches of their trunk lower down, thus producing an elliptical arrangement. 3. These anomalies may be explained by the development of the nerves. 4. Their interest lies in their explanation of pathological facts. Where symptoms connected with peripheral nerves are difficult to explain, the possibility of an anomaly should always be remembered.

1939. *Gilis on the Inter-maxillary Bones.*—The subject of the centres of ossification of the inter-maxillary bones is one on which much has recently been written, abstracts of various papers having appeared in the LONDON MEDICAL RECORDER. M. Gilis has now been able to show the head of a fœtus of six months, in which the four bones are all present, distinct and separate. Their arrangement confirms the description given by Albrecht.

1940. *Sebileau on the Cervical Fasciæ of the Thyroid Body.*—1. There are four cervical fasciæ, superficial, middle, deep, and transverse, the last connected with the middle. 2. The thyroid body possesses a constant sheath which is connected with the transverse cervical fascia. 3. This fascia also forms the sheath of the vasculo-nervous tube of the neck. 4. The thyroid body possesses—A. a superior and median ligament which is connected with its sheath and which passes from the superior border of the gland to be attached to the thyroid and cricoid. B. Two internal lateral ligaments which are lost in the sheath of the thyroid body where the latter adheres to the trachea. C. Six external lateral ligaments, which are lost in the transverse cervical fascia, and which follow the superior and inferior corresponding thyroid arteries, and the middle thyroid vein. 5. These ligaments have no independent existence, they are scarcely worthy of the name; the true means of fixation of the thyroid body is its intimate adherence with the trachea.

1941. *Valat on Imperforate Anus, &c.*—The rectum terminated in a *cul-de-sac* at 5 centimètres from the skin of the perinæum. From its inferior extremity a fibrous cord passed to the middle tubercle of the perinæum. Between the inferior extremity of the rectum and the bladder were found some muscular fibres uniting the two cavities. The sacrum consisted only of three pieces; instead of being concave it was straight on its anterior surface. At its inferior extremity and on the left side of the middle line was a small bony tubercle which might be considered either as a fourth sacral vertebra or as a representative of the otherwise absent coccyx. The right sacro-iliac articulation was nearer to the point of the coccyx than the left.

1942. *Debierre on Genito-Urinary Anomalies.*—The anomalies in question were observed in a child born at full term. There were two ureters on both sides, which were in each case independent of one another up to the point of their entrance into the kidneys. There were two uteri and two vaginæ, each with distinct hymen. There was also a small supernumerary spleen.

1943. *Popow on Ectopia Testis.*—This rare example of ectopia testis was one in which the gland was lodged under the skin at the root of the penis and on its upper surface. It was not atrophied; there was complete virility, and coitus was uninterfered with. Professor Popow explains the abnormality by supposing that the external and scrotal fasciculi of the gubernaculum testis may have been atrophied, whilst the internal remaining (functional) has drawn the testicle into its abnormal position.

1944. *Achard on Partial Duplicity of the Central Canal of the Spinal Cord.*—The specimen was taken from a child 8 years old, who died from Pott's disease. The duplicity of the central canal existed only in the cervico-dorsal region. Both canals were lined with epithelium, and one was situated in front of the other, but was exactly in the same antero-posterior line. Both had the greatest diameter in the transverse direction, and the anterior was somewhat the larger. In the other parts of the cord the canal was single, but presented some deviations from its ordinary shape. In the cervical region it was trifoliate, whilst lower down and just above the double part it was imperfectly constricted in the centre. Below the double part the shape of the canal was very irregular, with sinuous walls, and it was notably enlarged. In the lumbar region it was again trifoliate.

1945. *Potherat and Mordret on Ectopia of the Kidneys.*—The specimens were taken from a female subject. Both kidneys lay at the inferior part of the abdominal cavity and just above the superior aperture of the pelvis. The suprarenal capsules were normally placed. The right kidney received two arteries of the same size, both from the aorta; the first given off just below the superior mesenteric, which passed behind the inferior vena cava, and the other at the level of the inferior mesenteric, which passed in front of the vena cava. The left kidney received three arteries, all from the aorta (1) below the superior mesenteric and corresponding to the normal position; (2) a centimètre above the origin of the inferior mesenteric; (3) very slender, came off at same level as superior mesenteric. The duodenum was also situated lower than usual, being placed just above the aperture of the pelvis.

1946. *Hart and Carter on the Sectional Anatomy of Advanced Extra-uterine Gestation.*—(1) Fallopian-tube pregnancy may develop into the broad ligament (intra-ligamentous, Werth), and continue this development beneath the peritoneum of the pelvic floor (sub-peritoneo-pelvic of Dezeimeris). (2) An advanced gestation may be derived from a Fallopian-tube pregnancy, which develops as given in (1), and further lifts up the peritoneum until we get (3) an abdominal case entirely extra-peritoneal. For this form the term is suggested of sub-peritoneo-abdominal. (4) The placental changes in the sub-peritoneo-abdominal form are destructive to placental tissue and function, and inimical, therefore, to vigorous fœtal life. (5) In treatment, one great principle is to interfere where safest for the mother, without regard to fœtal life. (6) The placenta should be left after operation, unless it can be ligatured, as separation causes uncontrollable hæmorrhage. This is the usual reason for leaving it untouched, and one that cannot be gainsaid. The extra-peritoneal position of the placenta, and the great chance of its organising, as is shown in our specimen, forms another powerful argument for leaving it alone. In operations for advanced gestation the fœtus only should be removed, the cord tied, returned, and the wound closed, unless a septic condition requires drainage.

1947. *Raon on the Development of the Diaphragm.* The author's results are thus summarised: 1. The septa within the body cavities of mammals are secondary formations. 2. The first rudiments appear as follows:—*a.* The dorsal wall of the omphalo-mesaraic vein—which belongs to the ventral wall of the abdominal cavity or to the later intestinal wall—for a short extent of the course of the vein unites with the dorsal wall of the body cavity. By this means comes about the formation of a frontally-directed septum. *b.* In the neighbourhood of where the liver develops from the intestine the latter has a ventral mesentery which places it in connection with the ventral body wall. This mesentery, into which the liver grows, forms the first rudiments of a horizontally-directed septum. 3. When these two septa are formed, there are four communications between the cranial parts of the body cavity (pericardial and pleural cavities) and the caudal part of the same (abdominal cavity), namely, two dorsally placed to the septum 2*a*, one on each side of the intestine, and two ventrally placed to the same, one on each side of the septum 2*b*. The four communications become closed among mammals, the two ventral first, much later the two dorsal. 4. Between the ventral surface of the lungs and the dorsal surface of the frontal septum, which lies ventral to them, at an early stage a union forms in such a manner that on each side a narrow canal, blind at its cranial end, is formed between these parts. This canal opens on the abdominal side of the above-mentioned septum into the abdominal cavity. Amongst mammals, however, only the right canal becomes completely developed, whilst the left completely atrophies. The lumen of the persistent right pouch soon closes at the level of the passage of the œsophagus into the stomach. The part lying caudalwards to this, which remains open to the abdominal side, is in close relation with the recessus superior sacci omenti. The cranial end, at least in animals which have a right lung with an infra-cardiac lobe, forms a closed mucous sheath, which surrounds almost the whole periphery of the œsophagus in its inferior portion.

1948. *Poirier and Retterer on Bronchial Cartilages.*—The cartilages were obtained from the body of a dead woman, aged 40, and were found on the anterior border of the sterno-mastoid at the level of the crico-thyroid membrane. Each cartilage was surrounded by a thick perichondrium. The right measured 12 millimètres, the left 15 millimètres.

1949. *Griffiths on the Anatomy of the Prostate.*—The author concludes—1. That the third or median lobe exists, in many instances, as a well-defined portion of the gland at the time of puberty and during adult life, *i.e.* the period before enlargement of the prostate occurs, but in other instances it is very small or entirely absent. 2. This part or lobe possesses ducts of its own, which open upon the parts of the hinder wall of the prostatic urethra, which extends from the vesical orifice to the verumontanum. 3. This part or lobe also develops separately from the part of the urethra just mentioned, in the same way as the lateral lobes do from the part of the urethra on each side of the verumontanum, and it is not the result of an extension backwards of gland-tissue from the lateral lobes into the interval between the vasa deferentia beneath the neck of the bladder. 4. The whole gland is peculiar in this particular that the 'ducts' are short, and form mere channels in the stroma, being destitute of any special coats except a layer of epithelium lining them, and that the muscle-tissue of the prostate is so arranged around the terminations of the 'gland tubules' which form the secreting parts that the muscle, when it contracts, is able to act as an efficient expulsor along the whole course of the tubules. 5. This arrangement of the muscle in the prostate is developed in relation to the function of the gland (which is necessary to the true generative glands), and thus it is that the secretion accumulated in the tubules can be completely expelled into the urethra at once, or at least in a short time. 6. The muscle-element of the prostate is derived from the outer, circular, non-striped muscle-coat of the prostatic urethra, this coat being continuous with the circular coat of the bladder; therefore the muscle-element of the prostate is only indirectly continuous with that of the circular coat of the bladder. 7. The *utriculus masculinus* is not, strictly speaking, embedded in the prostate. It forms a distinct structure separate from the prostate; and, as the growth of the prostate greatly exceeds that of the *utriculus masculinus*, the latter is in time covered in, and appears as if embedded in the former.

1950. *Reid on the Topography of the Spinal Nerves.*—In this paper the author gives the results of his investigations into the relations between the superficial origins from the cord of the spinal nerves and the surface. In one table are given the exact positions of each of the nerves in the six subjects examined, and in a second the observed limits of variation. Mr. Reid points out that a consideration of the first table shows that the superficial origin of any individual spinal nerve has no fixed and definite relation to the apex of one, or the apices of two spinous processes, or the space intervening between two, as one might gather from the tables of Nuhn and Jadelot, but that its position varies considerably.

1951. *Lockwood on an Abnormality of the Brain.*—The right fissure of Rolando commenced above by opening into the great longitudinal fissure, and after descending downwards and forwards above an inch bifurcated to inclose a long narrow convolution. The two limbs which embraced this convolution ended by opening separately into the posterior limb of the fissure of Sylvius. The left fissure was normal.

1952. *Siebenmann on the Canals of the Internal Ear.*—The substance used by the author was Wood's metal, the bones being subsequently macerated first in solution of caustic potash (15–30 per cent.), afterwards in dilute hydrochloric acid (1–6 of water). By this method he states that the most delicate details of the preparation can be preserved. By employing clean bones, in the same preparation, not only can the canals of both aqueducts be shown, but also the separate branching vascular canals coming from each. As vascular canals of the aqueductus cochleæ are found constantly the canalis Cotunnii, and besides this, in more than half of all preparations examined, a canal arising in the fossa of the fenestra rotunda ('canalis accessorius II. aquæductus cochleæ'). They open through the external aperture of the aqueductus cochleæ into the inferior petrosal sinus. In connection with the aquæductus vestibuli there is also present constantly a special vascular canal ('canalis accessorius aquæductus vestibuli'). In the macerated temporal bone single Haversian canals of the spongiosa surrounding the capsule of the labyrinth communicate with the interior space of the three semicircular canals.

1953. *Kollmann on Hyperdaktyly.*—Prof. Kollmann confines his rudiment-theory, given in this paper, to digits developed at the borders of the hand (double thumb, or supernumerary little finger), other forms of hyperdaktyly requiring a different explanation. With regard to the forms alluded to he states that, though none of the stapedifera have more than five fingers, there are those which possess five fingers and traces of radial and ulnar digits (men, many mammals, reptiles, and Batrachians). These traces lie as rudiments, often very difficult of recognition, under the skin. In cases of hyperdaktyly in man these rudiments increase and project in different degrees of development. Thus, hyperdaktyly is not a pathological, but a theromorphic phenomenon, in fact, a special form of atavism.

BERTRAM C. A. WINDLE, M.A., M.D.

1954. *Viti on a Case of Persistence of the Omphalo-mesenteric Duct, with Fœtal Peritonitis.*—In dissecting a seven-months' female fœtus, a cyst the size of an orange was found in the peritoneal cavity. It contained yellow serum and meconium, and its walls bore all the anatomical characters of the coats of the intestines. The mother had symptoms of hydramnios when bearing this fœtus. The cyst lay in front of the intestines and communicated, through an opening in its posterior wall, with the cæcum, to the right with the ascending colon, to the left with the lower part of the ileum. [Reporter here quotes from the abstract in the *Centralblatt*, having been unable to procure the original paper. Whether one opening or three be signified, is not clear. The third communication (with the lower part of the ileum) would represent the original aperture, if Dr. Viti's theory be correct; the others, if more than one existed, may have been formed as in tubercular peritonitis.—*Rep.*] Universal peritonitis was discovered, the adhesions were innumerable. Dr. Viti concluded that the cyst represented the intra-abdominal portion of the omphalo-mesenteric or vitello-intestinal duct. To its persistence he attributed the peritonitis.

1955. *Vignard on a Case of Striated Muscular Tumour of the Ovary.*—In October 1888 a phthisical girl, aged seventeen, was admitted into the Salpêtrière under M. Terrillon. For eight months she had been swelling rapidly. Between March and October she was tapped twelve times. The tumour was ovarian and pedunculated. It was removed. The uterus and opposite ovary were healthy; much ascitic fluid escaped from the peritoneal cavity. The patient died of exhaustion about one hour after the operation. The tumour had the appearance of an encephaloid sarcoma. A very minute description of the microscopic appearances is given by M. Vignard. Sections stained with picro-carmine were found to be made up of interlacing fibres, some seen in their full length, others cut transversely and obliquely. These fibres bore all the appearances of striated muscular tissue arrived at a high degree of development. M. Vignard notes that only two cases of pure rhabdomyoma in structures where striated muscular tissue does not normally exist have been recorded. Both occurred in the testicle. One was described by Rokitansky; the second is published by Neumann in vol. 103 of Virchow's *Archiv.* Myosarcoma, with striated fibres, is less rare; it has been detected in the kidney (*see* Mr. Eve's case, *Trans. Path. Soc.*, vol. xxxiii., p. 312), and in the testicle. Striated muscular tissue has been found in dermoid ovarian tumours. M. Vignard insisted that in M. Terrillon's case the ovarian tumour had no dermoid characters. [Rhabdomyoma of the uterus, forming a racemose polypus, has been described by Pernice (LONDON MEDICAL RECORDER, vol. i., 1888, p. 476), and more recently by Dr. Mundé (*Amer. Jour. of Obstet.*, February 1889). M. Vignard's case is of high importance. Some authorities might still believe it to represent an aberrant type of dermoid.—*Rep.*] ALBAN DORAN.

PATHOLOGY.

RECENT PAPERS.

1956. FERRARI, P.—Experimental Obliteration of the Sinuses of the Dura Mater. (*Arch. Sci. Med.*, vol. xii. p. 4.)

1957. CARYOPHYLLIS, M.—On a Fibrolipoma of the Heart (*Fibrolipome du cœur*). (*Bull. de la Soc. Anat. de Paris*, 1889, p. 202.)

1958. THOMA, PROF. R.—On the Elasticity of Healthy and Diseased Arteries (*Ueber die Elasticität Gesunder und Kranker Arterien*). (Virchow's *Archiv*, Band 116, Heft 1, s. 27.)

1959. GRAUCHER AND LEDOUX-LEBARD.—On Zoogloeic Tuberculosis (*Recherches sur la Tuberculose Zoogléeque*). (*Arch. de Méd. Expér.*, T. i., Art. ii.)

1960. DARIER, J.—On Epithelioma of the Sweat-glands (*Contribution à l'étude de l'épithéliome des glandes sudoripares*). (*Arch. de Méd. Expér.*, T. i. Art. vi.)

1961. LANNEGRACE.—On the Influence of Cortical Lesions on the Sight (*Influence des lésions corticales sur la vue*). (*Arch. de Méd. Expér.*, T. 1, Art. vii.)

1962. MCFADYEAN, J., M.B.—On Actinomycosis. (*Jour. of Comparative Pathology and Therapeutics*, vol. ii., part 1, p. 1.)

1963. LEHILLE, DR. M.—On Fatty Degeneration of the Adrenals (*Note sur la dégénérescence graisseuse de la capsule surrénale*). (*Bull. de la Soc. Anat. de Paris*, March 1889, p. 264.)

1964. LINDT, DR. W.—On the Moulds of the External Auditory Meatus (*Ueber einen neuen pathogenen Schimmelpilz aus dem menschlichen Gehörgang*). (*Arch. für exp. Path. u. Pharm.*, Band xxv., S. 257.)

1965. GIANTURCO.—The Lesions caused by Hydrophobia. (*Wiener med. Presse*, No. 42, 1888.)

ART. 1956. *Ferrari on Experimental Obliteration of the Sinuses of the Dura Mater.*—Obliteration of a sinus of the dura mater constitutes no obstacle to the circulation of the dependent cerebral territories and originates no profound anatomical alteration in them. A very extended zone of the system of sinuses (*e.g.* all the sinuses of the vault of the cranium) may be obliterated without causing grave disturbance of the functions of the encephalon. Pure thrombosis of the sinuses of the dura mater, even if very extensive, does not produce any important symptom to the cavity. Occlusion of all ways of reflux of the blood from the cranial cavity kills rapidly, and usually with the occurrence of an epileptic attack. The grave symptoms of thrombosis of the sinuses of the dura mater in man are certainly more dependent on the complications than on the obliteration of the sinuses *per se.*

G. D'ARCY ADAMS, M.D.

1957. *Caryophyllis on a Fibrolipoma of the Heart.*—The specimen was taken from a male, aged 66, who died from Bright's disease. The heart was hypertrophied, and the tumour, which was pedunculated and measured 8-9 centimètres in length, was situated on the anterior surface of the right auricle. On section it was found to consist of connective tissue in small quantity surrounding masses of fat, the whole covered by the serous layer of the pericardium. The author had only been able to find one other account of a similar tumour, published by Albers in Virchow's *Archiv*, viii. 1855, p. 343.

1958. *Thoma on the Elasticity of Healthy and Diseased Arteries.*—At the conclusion of his article the author offers the following conclusions respecting arterio-sclerosis :—1. The development of primary arterio-sclerosis does not, as a rule, take place simultaneously in the different provinces of the aortic system. 2. Simultaneously with the first appearance of connective-tissue thickening and the formation of fat in the intima of single groups of vessels, a decrease of elasticity and a weakening of the wall is found in other groups before any obvious anatomical changes can be distinguished. 3. The weakening of the vessel wall takes place whilst here and there the first traces of connective-tissue thickening of the intima occur, and at this stage of the disease the risk of the production of an arterio-sclerotic aneurysm is greatest. 4. In the further course of arterio-sclerosis the intima undergoes a considerable connective-tissue thickening, by which the vessel wall is strengthened and its elasticity increased. The probability of the formation of aneurysm is by this means practically removed ; at the same time, however, the conditions permit of the force of the pulse-wave causing injury and leading to pulsus tardus and hypertrophy of the left ventricle of the heart. To these points should be added the conclusion that the origin of primary arterio-sclerosis is to be sought in a primary weakening of the vascular wall.

1959. *Graucher and Ledoux-Lebard on Zoogloeic Tuberculosis.*—Zoogloeic tuberculosis is due to a microbe which develops in the organs either in colonies or zoogloea of particular structure or in a state of dissemination. In the liver these zoogloea may systematically occupy the hepatic fibrous tissue, the intralobular vessels, or, indifferently, all the elements of the parenchyma. They vegetate freely without reaction on the surrounding cells, or they may be circumscribed by tubercles. There exist in the infected liver, with or without zoogloea, zones or islets of degeneration, due to the alteration of the hepatic cells by the microbe or the products which it secretes. The zoogloea is only a transitory phase in the life of the parasite ; it disappears after several passages through the organism of the guinea pig or of the rabbit, and the microbe can only be cultivated further in their tissues in isolated elements or in feeble groups ; it has varied and the variation has become definite in the same conditions of medium. By its evolution, by its experimental forms, by its macro- and microscopic lesions, the 'bacillary pseudo-tuberculosis' of Charrin and Roger is undistinguishable from the zoogloeic tuberculosis with disseminated microbes ; it is also a tuberculosis with zoogloea ; its identity with the tuberculosis of Malassez and Vignal appears probable, though at present it cannot be definitely laid down.

1960. *Darier on Epithelioma of the Sweat-glands.* 1. Epithelioma of the sweat-glands is not a tumour of definite clinical type and of constantly similar structure. 2. Histologically, such epitheliomata belong to numerous forms (adenoid, lobulated, tubular, and mixed). It is convenient to add to the forms already known that of a diffuse epithelioma, which may present itself in man under the aspect of multiple intradermic tumours of rapid growth. 3. The clinical characters of these epitheliomata are too variable to make it possible to establish a sure diagnosis in all cases, and notably to differentiate them from other tumours of the skin. 4. The symptoms which have been considered as characteristic for these tumours, such as benignity, slowness of growth, limitation, and mobility, only belong to the adenoid form of epithelioma which may take origin in the sweat- or sebaceous glands. Besides, tumours not epithelial in their nature may be accompanied by the same symptoms. 5. The origin of the neoplasm being at the expense of one part or another of the epithelial covering (sweat- or sebaceous glands, or interpapillary buds), neither producing a special anatomical form nor course, epitheliomata of the sweat-glands have the same prognosis and are subject to the same rules of treatment as other epitheliomata of the skin.

1961. *Lannegrace on the Influence of Cortical Lesions on the Sight.*—i. (*a*) Homonymous hemiopia is the result of a lesion which affects the sensory apparatus directly after it has undergone the chiasmatic semi-decussation. (*b*) The optic fibres, half-decussated, after having escaped from the optic thalami, irradiate over an extensive part of the convexity of the cortex from the occipital region behind to the motor region in front ; the greater part of the optic fibres concentrate themselves in the occipital lobe ; the remainder are dispersed in the anterior part of the cortex. The visual zone of hemiopia is then very extensive, but it has its principal focus in the occiput. (*c*) The visual cells can supplement one another to a certain extent ; the return of a certain degree of vision has been possible after several months of survival of an ape which had undergone a complete destruction of the two occipital lobes and the two angular gyri. (*d*) When a lesion affects the whole of the optic paths after their semi-decussation (optic tracts, thalami, and their neighbourhood) the hemiopia is absolute in a plane limited vertically. When the lesion only affects the terminal portion of the elements of the optic apparatus (cortical lesion) the hemiopia takes on a peculiar character, central vision persisting. ii. (*a*) Amblyopia is the necessary accompaniment of an alteration of the ocular sensibility, of which it appears to be the consequence. (*b*) Amblyopia is probably the result of a nutritive failure of the retina, produced by a lesion affecting the sensory ocular apparatus. As this apparatus undergoes a total decussation at the level of the pons, if the lesion occurs in the cerebral portion the amblyopia is necessarily crossed. (*c*) The sensory ocular bundle is located in the posterior segment of the internal capsule; it is there a near neighbour to the optic fasciculus. A lesion of this region, according to whether it affects one or both of the fasciculi, may cause crossed amblyopia or homonymous hemiopia, or both. (*d*) After leaving the capsule the sensory ocular fasciculus appears to radiate towards the front and parietal region, and especially towards the parietal lobe (superior parietal lobule). The oculo-sensory zone (zone of amblyopia) is then placed in the anterior part of the visual zone (zone of hemiopia). A cortical lesion affecting the two apparatus, sensory and special, at their point of contact, ought always to produce amblyopia and hemiopia simultaneously; this may not, however, occur on account of the mutual relation between the visual cells.

1962. *McFadyean on Actinomycosis.*—In an article on the subject of actinomycosis the author thus summarises his views as to the history of a colony in this disease:—1. It has its starting-point in one or more cocci transported by the plasma currents, or by the agency of a carrier cell (leucocyte). 2. The cocci multiply by elongation and subsequent fusion. When undisturbed by the surrounding leucocytes their growth and multiplication are after the manner of a streptococcus, but frequently they become irregularly grouped together (staphylococcus heaps). 3. By elongation some of the cocci give rise directly to short bacillary forms, and through these to long filaments. 4. The further extension of the colony is effected by the growth and multiplication of both threads and cocci; the former multiply by segmentation into bacillary elements, which may again elongate to leptothrix forms. 5. The leptothrix filaments may give rise by close segmentation to coccus forms. 6. The formation of clubs and such forms is evidence of diminished vegetative power of the filaments, possibly also cocci, in connection with which they originate. 7. The growth of a colony may be arrested at any stage by the agency of the animal cells (leucocytes), or by failure in the supply of the necessary pabulum. In that event, the majority of the threads tend to develop clubs at their outer ends (involution forms). The central cocci and the remainder of the filaments then disintegrate; but the clubs, which offer a greater (passive) resistance to the surrounding cells, may persist for an indefinite period.

1963. *Lehille on Fatty Degeneration of the Adrenals.*—1. The overloading with fat of the cells of the suprarenals, so far from being a physiological condition, constitutes an inconstant lesion in man as well as in a number of the mammals. 2. It affects by preference, when it is circumscribed, the middle region of the suprarenal trabeculæ—that is to say, that portion of the cortex which is intermediate between the peripheral subcapsular zone and the central region of the same cortical substance. 3. The degeneration does not affect the medulla. 4. It is met with especially in individuals who have succumbed to diseases of the circulatory system. It is often distributed in an irregular manner, occupying almost the whole of the cortical substance, but missing, without any apparent reason, extended portions of the trabeculæ.

1964. *Lindt on the Moulds of the External Auditory Meatus.*—Dr Lindt, in describing a new fungus of the external auditory meatus, mentions the following as having been found up to the present in that locality. 1. *Aspergillus fumigatus* (Fresen) which is still classed amongst the fungi imperfecti, since it is only known in the condition of conidia, and we are unaware whether it forms a sclerotium, *i.e.* is a true aspergillus, or whether it exists exclusively as eurotium. The former appears to be the case from an observation of Johann Olsen, who states that he has found its sclerotium. 2. *Aspergillus flavus v. flavescens* (Brefeld, Wreden) is also only known in the conidia condition. 3. *Aspergillus niger v. nigricans* (v. Tieghem, Wreden) belongs to the sterigmato-cyst group, since it has branched sterigmata. Its fructification was discovered by V. Tieghem, and described exactly as sclerotium by Wilhelm. 4. *Aspergillus nidulans* (Eidam); two cases of the occurrence of this form have been described by Liebermann. 5. *Eurotium malignum* (Lindt), the form dealt with in the paper under consideration.

Bertram C. A. Windle, M.A., M.D.

1965. *Gianturco on the Lesions caused by Hydrophobia.*—An abstract of the author's researches, conducted in Professor Schron's laboratory, is given by Dr. A. Pavone. A man, aged 30, was admitted into Professor Cantani's wards, having been bitten by a mad dog nearly six weeks previously; the man died with paraplegic symptoms 24 hours after admission. The autopsy, made 30 hours afterwards, showed dark coloration of the muscles and blood, which was mostly fluid. The grey matter of the brain and spinal cord was hyperæmic; there were also slight subarachnoid hydrocephalus, renal hyperæmia, commencing fatty degeneration of the liver, pulmonary œdema, and pulmonary hypostasis. A careful histological examination was made after hardening (in Müller's fluid for the most part). The central canal of the spinal cord was somewhat dilated and surrounded by a thick layer of lymphoid cells; a similar layer accompanied the two lateral veins. This periependymitis extended the whole length of the cord, gradually diminishing upwards. The grey matter of the anterior horns was saturated with blood, and (in the lumbar region) showed accumulation of lymphoid cells in the lymphatic sheaths of the vessels. Here and there the cells were independent of the blood-vessels, and looked like small miliary abscesses. The adjacent nerve-cells were generally atrophied, and surrounded, and even penetrated, by free leucocytes. In the periphery of the liver-cells numerous yellowish-brown granules, consisting of bile-stuff, were found. This appearance was found also in the liver-cells of another patient who had died of hydrophobia. The cerebral convolutions, also the area adjacent to the bite, afforded nothing special. Examination of a dog showed the same cellular infiltration of the lymphatic sheaths of the vessels as above stated, but chiefly marked in the medulla. The nerve-cells themselves are only secondarily affected in these cases. E. J. Edwardes, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

1966. **EPERON, DR.**—On the Operative Treatment of Vertical Deviations of the Eye of Paralytic Origin. (*Archiv. d'Ophthal.*, May-June 1889.)

1967. **LAGRANGE, DR. FELIX.**—Pathological Anatomy of Chalazion. (*Archiv. d'Ophthal.*, May-June 1889.)

1968. **WIDMARK, DR. JULIAN.**—On a Case of Glioma of the Retina. (*Nordiskt Medicinskt Arkiv*, Band xx., No. 15.)

ART. 1966. *Eperon on the Operative Treatment of Vertical Deviations of the Eye of Paralytic Origin.*—This forms rather an important contribution to the treatment of paralysis of the oblique muscles. The author's method consists in correcting the vertical displacement caused by paralysis of one oblique by advancement of the opposite rectus, and *vice versâ*; for example, he would treat paralysis of the superior oblique (which causes upward deviation) by advancement of the inferior rectus, and paralysis of the superior rectus by advancement of the inferior oblique, and so on. The following cases illustrate his views:—1. Traumatic paresis of the right superior oblique. There was the typical diplopia, the vertical displacement being 12°, the homonymous lateral only 1°. After failure of ordinary treatment the inferior rectus was advanced; there was immediately vertical displacement of about 6° in the opposite direction. Gradual improvement followed, and eventually complete restoration of the binocular field. 2. Paresis of left superior oblique—cause unknown. The left inferior rectus was advanced with the same immediate effect as in the preceding cases, viz., inversion of the vertical diplopia being rather excessive—13°—the sutures were removed on the second day. This proved to be a mistake, and the effect of the operation became entirely nullified. Re-advancement failed. The superior rectus of the other eye was now advanced, and this was followed by tenotomy of the inferior rectus, the eventual result being perfect. 3. Paralysis of the left inferior oblique of old standing. Complete cure by advancement of the superior rectus. The author draws attention to the great loss of converging power that occurs in paralysis of this muscle. It is, however, so seldom affected alone that the condition has little practical interest. 4. Paralysis of the right inferior oblique, tenotomy of the inferior rectus of the same eye. Reversal of the vertical diplopia. The effect was limited by means of a conjunctival suture, and the ultimate result was good. The author, however, believes that the result would have been attained more quickly and more certainly by advancement of the superior rectus. In cases five and six there was paralysis of the third nerve, and in one of the obliquus superior of the same side, but, as these cases were somewhat more complicated, we will not give the details. From these cases the author draws the following conclusions:—1. That vertical deviations of the eye from paralytic origin are usually less than 10°, and are therefore easily amenable to operative treatment, when other means have failed. 2. Operative proceedings are rendered more easy by the fact that the vertical movements of the eye are under the control of two sets of muscles, both of which are not often paralysed at the same time. As far as movement in the vertical plane is concerned, we may look upon the rectus superior and the obliquus superior as opponents, as also the rectus inferior and obliquus inferior. 3. Paralysis of the obliquus superior can be remedied by advancement of the rectus inferior, and so on. In slight deviations capsular advancement is preferable to advancement of the tendon.

1967. *Lagrange on Pathological Anatomy of Chalazion.*—This is an important contribution to the pathology of a subject which appears generally to have been considered too insignificant for original research. The statement that these meibomian tumours are simply retention-cysts has been handed down from text-book to text-book, and is generally accepted without any hesitation. Other theories have, however, been held, and three may be said to have obtained some acceptance. (1) That just indicated. (2) One that considers the primary lesion to be inflammation of the tarsus, or an irritation due to the presence of micrococci developed in the epithelial *débris* of the gland. (3) That the tumour developes in the cellular tissue adjacent to the cartilage, and is independent of the meibomian glands. The author considers that each of these theories contains an element of truth, and that the following is the sequence of events that leads to the formation of a chalazion—first, retention of epithelial elements, then adenitis, periadenitis, and destruction of the tarsus, then proliferation of embryonic connective-tissue elements in the surrounding cellular tissue. He admits the presence of microbes in the contents of the tumour, but considers that they are secondary and unimportant. These views are founded upon an examination of the contents of fifteen chalazia, some of which were removed in the ordinary way by incision, others were dissected out with the adjacent cartilage, the last constituting, of course, by far the most important evidence. When the contents were removed they were immediately placed in alcohol, hardened, and cut in the ordinary manner. They consisted chiefly of young embryonic cells, epithelial *débris*, fatty substances in very small quantity, and fluid in variable amount; usually the latter was scanty, and the diffluence of the tumour was due to the absence of any stroma separating and supporting the cells. Evidently this collection of cells had a great tendency to become organised, for in two cases new vessels were found. Microbes were found, but the author considers it highly improbable that they had any share in the formation of the tumour. According to the author the following are the stages through which a chalazion passes: first, retention of epithelial products in the meibomian glands, so that the gland is seen distended with an accumulation of epithelium of a white colour; very soon a chronic inflammation of the surrounding tissues takes place, so that the tarsal cartilage becomes replaced by a tissue consisting almost entirely of embryonic cells; an ulcerative process takes place, and destruction of the cartilage in which the gland is imbedded occurs usually towards the conjunctival surface. In most cases, but not always, the tumour becomes encysted, the wall being formed by organisation of the inflammatory products external to the gland, and not, as is often said, by the wall of the distended gland. The author, therefore, considers a meibomian cyst as a granuloma secondary to retention of the glandular secretion. W. ADAMS FROST.

1968. *Widmark on a Case of Glioma of the Retina.*—The patient was a little girl of 8 months.

No relapse fifteen months after the removal of the eye. The tumour occupied the whole space between the choroid and the retina, which was completely detached. The most of the tumour was composed of fine filaments imbedded in a granular detritus with thin cells. These threads formed an elegant network by the alternation of large and small spaces. There could be seen by the naked eye a great number of septa, which appeared under the microscope to constitute the bulk of the tumour, with narrow spaces between. Throughout this part of the tumour there were few cells, though at a few points there was a greater quantity of cellular tissue. In several places where cells were scarce there could be seen long prolongations thrown out from the cells, of the same nature as the neighbouring filamentous network. In the regions where cells were more abundant these cells showed considerable degenerative changes, some of which seemed to have commenced in the nuclei and others in the protoplasm. The latter was puffed out, having a vesicular appearance, and showing a very clear outline or margin, like a membrane. It appeared as if divided into a number of little compartments by fine, brightly-coloured striæ. The tumour was almost entirely destitute of blood-vessels. Of the posterior part of the retina there remained only the layer of nerve-filaments. The anterior part was, on the other hand, relatively well preserved, with spots of glioma appearing here and there in the layers of nerve-filaments as well as in the two granular layers, principally the internal. The spots traversed the retina in front as well as behind. The pigmented layer of the retina again covered the choroid in great part. The tumour had invaded many parts of this membrane. The space between the lens and the retina was occupied by a portion of the tumour. Of the vitreous humour there only remained a thin layer, forming some fine lamellæ in a direction generally parallel to the posterior surface of the lens. There was no fine limit between the lens and the *débris* of the vitreous body. Although the ophthalmoscope showed no signs of opacity of the lens, the posterior capsule was found completely separated from the lenticular substance, and the interval was occupied by the mass of the tumour.

W. W. Ireland, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1969. Bendandi and Boschi.—A Case of Essential Epilepsy Cured by Trepanning the Cranium. (*Gazz. degli Ospitali*, April 10, 1889.)

1970. De Renzi, E.—Suspension in the Treatment of Chronic Spinal Meningitis. (*Rivista Clinica*, May 1889.)

1971. De Renzi, E.—Treatment of Tetanus by Absolute Quiet. (*Riv. Clinica e Terapeutica*, No. i., 1889.)

1972. Barié and Joffroy.—Tabes Dorsalis and Exophthalmic Goître.

1973. Weir-Mitchell.—The Treatment of Pott's Paralysis by Suspension. (*American Jour. of Med. Sciences*, May 1889, p. 439.)

1974. Marwood.—On Paraplegia—the Result of Hydatids within the Membranes of the Spinal Cord. (*Australasian Med. Gazette*, April 1889, p. 182.)

1975. Blocq, Dr. Paul.—On the Contra-Indications of the Suspension Treatment in Locomotor Ataxy. (*Bull. Méd.*, June 9, 1889.)

1976. Féré, M.—On the Treatment of Epilepsy by the Application of the Actual Cautery to the Scalp. (*Bull Méd.*, June 26, 1889.)

Art. 1969. *Bendandi and Boschi on a Case of Essential Epilepsy Cured by Trepanning the Cranium.*—Bendandi communicated, in his own name and that of Dr. Boschi, to the Medical Chirurgical Society of Bologna, March 22, 1889, an interesting account of a case of essential epilepsy cured by trepanning. Patient's history showed that he was of rather dull intellect, without hereditary disease, and non-syphilitic. When a child he had a blow with a stone on the occiput, but this was followed by no consequences. At 18 an epileptic attack first appeared, after a fright. In the first year the attacks recurred once or twice a month, then became gradually less frequent, until for a period of ten years he only had three or four attacks in the twelvemonth. In 1888 they became very frequent, even two a day. When he first came under the author's observation, right hemi-paresis with contraction of the flexor muscles of the right arm, and drawing of the right facial angle, was noticed. From the course of the disease and the character of the patient, and from the mode of onset of the convulsions, hysteria and hystero-epilepsy were out of the question. The clonic spasms and phenomena of depression of motility on the right half of the body, and the spasm of the facial on the right, all induced the authors to consider the case one of essential epilepsy, to which was joined some special lesion with a focus localised in the left cerebral motor zone. With the idea of removing this lesion, the authors determined, by a method similar to that indicated by Giacomini, the situation of the fissure of Roland, and thence the centres which could be affected by the lesion, and, using a trephine with a diameter of 1 centimètre, four times they made an ample breach, having for its centre the point already determined. Not finding above the dura mater evident signs of lesion, they made in it a cruciform incision. A tablespoonful of colourless serous fluid escaped; this did not appear encapsuled, but seemed like the cephalo-rachidian fluid. The convolutions were flattened as if by compression, and softer than normal. To explore the subjacent tissue an incision was made by the bistoury for a depth of 3 centimètres. The finger was introduced into the wound, and no sign of suppuration or extravasation was found, the surrounding tissues only appearing abnormally soft; in a word, only œdema limited to the part explored was found. The dura mater was closed by catgut, the breech in the cranium was left open for the escape of any fluid that might be formed, and the cutaneous wound closed by the usual interrupted suture. The temperature never rose above 38° C., and the patient complained of slight dull pain in the cut, but nothing else. The attacks, which had been twice daily, appeared no more. In the twenty days succeeding the operation the hemiparesis increased in relation, perhaps, to the cerebral wound and the consequent exudation. But after this the improvement was steady, and now, two months after the operation, there have been no more attacks, and there is great gain in motility, the patient being able to write well, which he could not do before.

1970. *De Renzi on Suspension in the Treatment of Chronic Spinal Meningitis.*—De Renzi (*Rivista Clinica*, May 1889) publishes the history of a case of chronic meningo-myelitis, with predominance of the meningeal symptoms, treated by suspension with Sayre's apparatus. Each suspension lasted for two or three minutes. It was employed five times on alternate days. The day after the first suspension the patient felt decidedly better. After the second application he began to walk without a stick, which he could not do before. After the second application, too, the pain diminished, and the strength in the lower limbs and power of walking much increased. When the patient left the hospital pain had entirely disappeared. The movement of rotation of the vertebral column was performed almost as in health, and walking was normal. De Renzi also draws attention to the advantage of gymnastic exercises of the muscles of the lower extremities. This patient was instructed to perform, while lying down, certain movements of the legs, and De Renzi is inclined to attribute not a little of the success of treatment to this practice.

1971. *De Renzi on the Treatment of Tetanus by Absolute Repose.*—The author gives the history of a case of traumatic tetanus treated by him successfully in hospital by absolute repose. In this case he finds a fresh confirmation of the efficacy of the treatment consisting in complete isolation and removal of all stimuli. Death occurs often from exhaustion, sometimes from suffocation during the more severe paroxysms of spasm; by absolute repose the number and intensity of the shock may be lessened. The disease then runs a milder course, the virus being neutralised or eliminated gradually, but it acquires in duration what it loses in gravity and intensity. In all cases in which the author has tried this treatment the course of the disease has been prolonged beyond the ordinary limits, but the patient outlives the tetanus. The method employed is shortly this: 1. The patient with his ears stopped with wool or wax is placed in a dark, quiet room, and must be made to understand that his cure depends on absolute repose. 2. Thick mats must be put down in the room and passages near to deaden the footfalls of the attendants. 3. His room is to be opened every 4 hours with the greatest care and quietness. Food must be liquid, milk, egg beaten up in broth, wine and water, &c., and must be given in a feeding-cup with a spout to it. 4. A covered light only must be taken into the room. 5. If constipation occurs (as in the case narrated) no purgatives or clysters must be given; before all things perfect repose is necessary. 6. If pains are intense recourse must be had to belladonna and ergot. G. D'Arcy Adams, M.D.

1972. *Barié and Joffroy on Tabes Dorsalis and Exophthalmic Goître.*—M. Barié, at the *Société Médicale des Hôpitaux*, read notes on the case of a patient who presented all the symptoms of tabes and those of exophthalmic goître at the same time. He considers, after studying the connection between these two affections, that their simultaneous presence cannot be regarded as a mere coincidence. In this instance the exophthalmic goître was the result of tabes dorsalis; in certain cases the former affection may, according to Dr. Barié, be regarded as one of the first symptoms of tabes. M. Joffroy recorded several cases of tabetic patients who presented symptoms of exophthalmic goître. Six out of seven tabetic patients treated by M. Joffroy suffered from exophthalmia; all were affected with tachycardia; thyroideal tumours were observed in only very few cases. M. Joffroy does not attribute the exophthalmic symptoms to tabes. In the above-mentioned cases the symptoms of Basedow's disease preceded the tabetic symptoms. According to Dr. Joffroy, tabes dorsalis and exophthalmic goître may be combined, but their simultaneous presence cannot be regarded as a special localisation of the lesions characteristic of Duchenne's disease.

W. Vignal.

1973. *Weir-Mitchell on the Treatment of Pott's Paralysis by Suspension.*—In the *American Jour. of the Med. Sciences*, May 1889, p. 439, Dr. Weir Mitchell contributes an interesting paper on the treatment of Pott's paralysis, and from his own experience he draws the following conclusions:—Suspension should be used early, and, if used with care, it enables one to slowly lessen the curve, and in these cases there must be in some form a replacement of the crumbled tissues. Unless there be great loss of power, the use of the spine-car or chair of J. K. Mitchell enables suspension, especially in children, to be combined with some exercise. No case ought to be considered desperate without giving a trial of suspension, which has often succeeded after failure of other methods. The now well-known influence of extension in Pott's palsy makes it probable that in other forms of spinal disease, not due to caries, active extension in its various forms may be of value. The mode and duration must be made to conform to the needs, endurance, and sensation of each case.

1974. *Marwood on Paraplegia—the Result of Hydatids within the Membranes of the Spinal Cord*—In the *Australasian Med. Gaz.*, April 1889, p. 182, Dr. Marwood records the case of a man, aged 31, who was admitted into hospital in September 1887, with well-marked paralysis of the lower extremities and loss of control over bladder and rectum. Treatment was of no avail, and he died in January 1889. On *post-mortem* examination it was noticed that the transverse processes of the fourth and fifth lumbar vertebræ were completely carious, breaking down with the slightest pressure, several small hydatid cysts escaping. Exposing the spinal canal, numerous cysts were seen, and opposite the tenth and eleventh dorsal vertebræ, and within the meninges, were several fluctuating hydatid tumours. On opening the abdomen from the front, and exposing the spinal column, two round tumours, about the size of oranges, were seen lying on each side of the lumbar vertebræ—the one on the left side communicating with the spinal canal by means of an old suppurating cyst. The spinal cord showed no signs of pressure, but the nerves of the cauda equina, running between the dura mater and the mother cyst, were flattened and thinner than usual; and much atrophied from pressure. It was evident that the hydatid cyst had developed within the membranes, but whether in the arachnoid, or between the arachnoid and pia mater, it was impossible to say. Richard Neale, M.D.

1975. *Blocq on the Contra-Indications of the Suspension Treatment in Locomotor Ataxy.*—The author points out that the contra-indications of the treatment of ataxia by suspension may be grouped under three heads, (1) causes affecting the general condition of the patient, (2) certain cardio-pulmonary and nervous conditions, and (3) certain local lesions: 1. Organic debility, whatever its cause, constitutes a distinct disability, and the same applies to anæmia, œdema, and obesity. The last-named is not exactly a contra-indication, but indicates the necessity for extra prudence in carrying out the treatment. 2. Emphysema and pulmonary phthisis are both contra-indications, and an atheromatous condition of the vessels exposes the patient to a serious risk of apoplexy. In the same category should be placed valvular lesions of the heart, whether compensated or not. As regards the nervous system, spasmodic affections generally are very liable to be aggravated rather than relieved by the treatment. 3. The state of the teeth should be looked to in order to estimate the ability of the patient to support the pressure of the chin strap. Moreover, the tendency to 'spontaneous' fracture of the bones in tabetics ought always to be borne in mind.

1976. *Féré on the Treatment of Epilepsy by the Application of the Actual Cautery to the Scalp.*—M. Féré showed, before the *Société Méd. des Hôpitaux*, two epileptic patients treated by means of the actual cautery, dotted over the scalp. One of them, under treatment since February 1887, had 21 attacks in 1886, 7 in 1887, 1 in 1888, and this year, so far, none at all. The other patient had 63 attacks in 1886, 45 in 1887 (the treatment having been begun in April of that year), and in 1888 he had only five. In several other cases he had succeeded in bringing about an ephemeral improvement or a modification in the paroxysms. In one of them the treatment caused the suppression of the convulsive attacks, which were replaced by crises of cutaneous hyperæsthesia. ALFRED S. GUBB.

REVIEWS.

ARTICLE 1977.

Manuel de Médecine opératoire. Par J. F. MALGAIGNE. 9^me Edition. Par LÉON LE FORT. Seconde partie. Paris: Germer Baillière. 1889.

Operative Surgery. By J. F. MALGAIGNE. 9th Edition. By LÉON LE FORT. Second part.

THIS is the concluding part of the text-book of operative surgery we have already noticed in these pages, and bears out the character for soundness which we have already bestowed upon the first part of the work. French works have often a very limited reference to authorities foreign to their country, and though very exhaustive in the history of their subject from the time of the first Frenchman—who must have been Adam himself—very often contain information only about the French schools. The present manual, however, recognises much of the work done in this and other countries. The present editor is so well known to European surgery that such a text-book could not be in abler hands. But he has set his face against much of the accepted teaching of the modern school of Listerism, and the effect of this is seen in the instructions given about operations; or, perhaps, one might more justly say, in the absence of instructions we are accustomed to. M. Le Fort, however, is an ardent advocate of cleanliness and care, and believes that all septic and poisonous states of wounds are traceable to infection by unclean fingers, instruments, and dressings, though not by atmospheric germs. And his success in the treatment of operations and wounds has also been noticed in these pages. In the present work we do not think enough stress has been laid upon his own principles in the notice of individual operations—principles which have been long and more and more generally accepted or arrived at in this country, but which are taught with careful thoroughness and persistence here in surgery.

This, the concluding part of Le Fort's Malgaigne, contains the special operations, and is accompanied by four hundred and thirty-four illustrations, making a total of nearly eight hundred. These woodcuts are generally good. The preface deals with some important matters in the forcible language of the author, and among these a reference to what is almost incredible—that some surgeons divide their operation fees with the recommender of the case to them; and this with a view of getting cases and enlarging their tables of statistics. He also discusses how it is that there are epidemics of special operations, and young surgeons meet with or make wonderful experiences which the older surgeons never had and now stand amazed at. He considers that the rush after notoriety and the often culpable boldness of the surgeon have as much to do with this as the assistance of anæsthetics, and the greater safety which has come with antiseptic precautions.

Among the special operations which are here discussed we are disappointed with that of trephining of the skull, which certainly is wanting in careful treatment; and this class of operations has now become of great practical importance. Nothing appears to be said about spinal trephining, and the remarks upon prostatic operations are much limited to Mercier's views and experience. In renal surgery the account does not include any reference to Mr. Morris's late English work, and does not appear to us to be as full as it should be. Recent advances are generally noticed, and we have good accounts of the operative procedures of cystotomy, in which Guyon's views have a natural preference; litholapaxy, suture of intestine, thyrodectomy, gastrotomy, and gastrostomy, abdominal surgery of all kinds, ovariotomy, in which M. Le Fort has had a large experience, but in which the treatment is not to our minds altogether satisfactory as to drainage, thoracoplasty, Porro's operation, Alexander's operation, hysterectomy, &c.

It will be seen, therefore, that M. Le Fort has brought this manual up to date, and our remarks as to the author's views with regard to antiseptic surgery do not intimate any want of appreciation of the work as a sound representative of a large school of modern surgeons. The accounts given are essentially historical and manipulative. To our mind more might be given in the way of directions as to dressings after treatment and progress after operation. W. W. WAGSTAFFE.

ARTICLE 1978.

Lessons in Gynæcology. By WILLIAM GOODELL, A.M., M.D., Professor of Clinical Gynæcology in the University of Pennsylvania, &c. Third Edition, thoroughly revised and greatly enlarged. With 112 Illustrations. Philadelphia: F. A. Davis. 1887.

THE general character of Dr. Goodell's work is well known. The author writes like a man who is accustomed to teach. This fact is most plainly to be recognised in the records of cases scattered throughout the volume. In order to make clinical details pleasant reading, a writer must possess good powers of literary composition, and Dr. Goodell can lay claim to being an accomplished writer, allowance being made on this side of the Atlantic for certain distinctions of idiom, and also for difference in matters of taste. The woodcuts are mostly of inferior quality, quite unworthy of the letterpress.

Dr. Goodell has extreme views concerning the direct result of many pelvic disorders, with marked objective symptoms, from sexual irregularities, and from the real or so-called evils of civilisation. Unfortunately for one case, where a uterine or ovarian inflammatory disorder can be traced, more or less obscurely as a rule, to turpitude or folly, at least a dozen cases pathologically similar can be directly referred to abortion or parturition. The author, in his zeal, hardly concealed throughout his writings, to make out that moral transgressions must entail direct physical punishment, appears to overstate his case. Dr. Goodell is probably more correct when he applies his peculiar theories to neurotic affections. He says little or nothing about excessive tea-drinking, a very common cause of these affections in the British Isles, from which we might suppose that his countrywomen (whom we believe and trust he libels in respect to other failings) are less addicted than Englishwomen to that bad habit.

Dr. Goodell has much to say, like most American writers, on plastic operations; and, as we have above hinted, his words are more instructive than his diagrams. He insists, like nearly all his countrymen who write on the subject, that laceration of the cervix constantly causes definite uterine disturbances, and that Emmet's operation is the remedy. 'My own experience,' he writes, 'in the Dispensary for the Diseases of Women at the University of Pennsylvania would lead me to infer that about one out of every six women suffering from uterine trouble has an ununited laceration of the cervix. *As another evidence of its frequency, I may add that I have operated for this lesion over three hundred times.*' This logic will hardly be accepted by the majority of British writers. The arguments for and against the above statements are too well known to need recapitulation in this review.

Turning to operations which require bolder manual movements, we find sounder advice. Thus the author's caution as to the use of the écraseur at p. 235 is well worded, and calculated to impress the student and the inexperienced practitioner. The large though coarse drawings illustrating Martin's hysterectomy are really instructive; we regret that no woodcuts are added to explain the stages of the extraperitoneal variety of that operation.

The author is undoubtedly sound in his opinions relating to hygiene, and most, though by no means all, of his remarks on insanitary conditions and their effect on women's constitutions apply to Englishwomen as well as to Americans. ALBAN DORAN.

ARTICLE 1979.

American Resorts, with Notes upon their Climate. By BUSHROD W. JAMES, A.M., M.D. 8vo. Pp. 278. 1889. Philadelphia and London: F. A. Davis.

ONE-THIRD of this handsome volume consists of a translation of the remarks of the Russian meteorologist Woickof on climates. Those of Siberia and Nova Zembla, the North American Arctic and other regions, and even of the West India Islands and South America, as far as Cape Horn, are exhaustively treated of. Many of the peculiarities of North American climates, such as the unusual frequency of cyclones, the effect of the presence of the large inland (chiefly fresh-water) lakes, the singularity of the Californian climate, being so much better at a little distance from the coast than along it, as notably at San Francisco, are amply discussed; this section on climate requires careful study. But the book is addressed mainly to general readers; and the great variety of health-resorts open to the natives of America, without crossing the Atlantic to Europe, is set forth, not in detail, of course, but with many useful hints as to selection of suitable places.

The space of ground gone over is enormous. We have seaside resorts both on the Atlantic and on the Pacific. Then come fresh-water resorts, including all the lakes of the interior, from the north to the Gulf of Mexico. Then the mountain resorts are enumerated and commented on. Next we have trips upon ocean, lake, and river, including, besides American resorts, Bermuda, the West Indies, and Sandwich Islands. Then follows a list of all the varied mineral waters of America. Summer and winter resorts are examined, both in some detail, and even a few scanty remarks are made on South America as well as on Mexico.

It will thus be seen that an immense amount of useful knowledge has been brought together, giving a very extensive view of what America has to offer in the way of health-resorts..

The following extracts from what Dr. James says of climatic stations for phthisical subjects will give a general idea of his style :—

In selecting mountain resorts for phthisical patients places having a sheltered locality should be given the preference. In the summer months those sufferers may find suitable places among the White, Green or Ardironak Mountains. The Alleghanies in the region of Asheville, N. C., are also desirable. But the best resorts of this kind are found among the Rocky Mountains. The most important of these are in Colorado, where the range attains its greatest height. Colorado Springs, Idaho Springs, Manitoba Springs, Pagosa Springs, Pueblo, Denver, and many other places in Colorado, might be named as suitable. In New Mexico many excellent places are found among the mountains; of these probably Santa Fé and Las Vegas are most frequented.

A mild and moderately dry climate is found in Southern California amidst the most delightful surroundings. Of all the charming places of resort in this region perhaps San Diego and Coronado Beach deserve to be mentioned first; but Santa Barbara, Los Angeles, San Bernardino, and San Luis Obispo follow in quick succession. Los Angeles lies in a valley sheltered by surrounding mountains, escaping the winds that are felt along the coast. Pasadena in its suburbs, 500 feet higher, is beautiful. It is a popular and fashionable resort, with well-appointed first-rate hotels.

For a mild and moist sedative climate there is Florida, where Fernandino, St. Augustine, and Jacksonville are the most popular resorts.

Occasionally, we must not omit to mention, Dr. James indulges in language of much obscurity, and very different from his usual style.

Thus to one class of patients he recommends 'a retreat where he may listen to the secrets that nature has to tell him,' a place where he can settle down quietly and say, 'Here I may loaf and invite my soul.' And again, 'This aspect of the subject leads us to that mysterious realm of psychological and spiritual forces hidden as yet from our view by the shadows of ignorance and prejudice, but which must be sooner or later revealed as an important factor in the healing of sick bodies and minds diseased.' J. MACPHERSON, M.D.

ARTICLE 1980.

Manuel Pratique de la Garde-Malade et de l'Infirmière. Publié par le Dr. BOURNEVILLE. Tome I. Anatomie et Physiologie. II. Administration et Comptabilité Hospitalières. III. Pansements. IV. Femmes en Couches—Soins aux Aliénés—Médicaments. V. Hygiène. Paris: aux Bureaux du *Progrès Médical.*

DR. BOURNEVILLE speaks, in the introduction to these five volumes, of the numerous nurse-training institutions, ambulance classes, and lectureships on 'first aid' and hygiene which exist in England, the United States, and Switzerland. The want of a system for training nurses has long been felt in France. Ten years ago Dr. Bourneville succeeded in persuading the Municipal Council of Paris to organise two schools of nursing, one at the Salpêtrière, the other at Bicêtre. Since the foundation of those excellent institutions, this manual has been prepared as a text-book for the pupils. It has now reached a fourth edition.

A full review of the five volumes is hardly necessary; works of this class are very familiar to all readers of medical literature in this country. We need hardly say that, with the assistance of eminent authorities, Dr. Bourneville's *Manuel* is well prepared and thoroughly fitted for its purpose. The French language is suited for teaching and for the simplification of scientific phraseology. Hence the first, third, and fourth volumes are of high excellence. The fifth, on Hygiene, could hardly prove of full benefit to any person who has not received the elementary education needed for a physician. All these volumes may be studied with profit by English-speaking teachers of nursing; it is a good thing to be conversant with foreign words and expressions relating to hospitals and nursing. What grammarians term connotation is the special difficulty in this case; a difficulty almost as great in medical as in political and social nomenclature. Just as Englishmen must be careful about the precise translation of *parlement de Paris*, *tiers-état*, *gendarme*, &c., so they must clearly understand the meaning of *garde-malade*, *infirmière*, *interne*, *chef-de-clinique*, *intendance*, and *assistance publique*, words often inaccurately rendered into our own language. The second volume is a remarkable and interesting production, which persons already in responsible offices may study with profit, but hardly suited for education. The sketch of hospital administration is excellent. On the other hand, several pages are devoted to an explanation of the great benefits of laicisation. The pupil is taught that laicisation is nothing new, and that 'the others did just the same'; for Louis XII. took the management of the Hôtel Dieu out of the hands of canonesses and committed it to lay nurses, and Louis XIV., of all men, 'secularised' Bicêtre and the Salpêtrière. An appendix of forty-five pages consists of a long defence, or apology of the systematic abolition of saints' names in hospital wards. We find that Jenner has replaced St. Athanasius. The appendix includes an alphabetical list of the great men whose names have displaced the saints, with short (and very good) biographies of each worthy. That the authorities have been liberal, no one can deny. The list includes Harvey, Voltaire, Henri Quatre, St. Vincent de Paul, Molière (no panegyrist of the medical profession), St. Louis and Gabrielle d'Estrées. The latter seems to have received the honour of ward-dedication on the strength of a tradition homologous to another in relation to the foundation of Chelsea Hospital. All this, however, is unnecessary in an educational work; in fact, Vol. II. is more fit for the literary doctor than for students of nursing. The other volumes, we repeat, are thoroughly adapted to the aims of their authors and editor.

ALBAN DORAN.

NOTES ON BOOKS.

ARTICLE 1981.

On the Use of Lobeline in the Treatment of Asthma. By DR. SILVA NUNEZ. Rio de Janeiro: 1889.

THIS monograph, of which the substance was presented to the First Brazilian Congress of Medicine and Surgery, held in September 1888, contains the later views of the writer as to the treatment of asthma by lobelia. A previous account appeared in February 1886, in which the continued use of the tincture in large doses was strongly advocated. The present work deals with the action of the active principle of the drug when administered in the course of asthma, the author's experience having led him to seek for a more convenient form of administration than the tincture, which, besides its disagreeable taste, was found to be uncertain in its action, and frequently caused vomiting. Lobeline has never been included in official formulæ; few experiments have been made to ascertain its therapeutic value or dose, and it has generally been regarded as a highly toxic drug. Beginning with a dose of 1 centigramme, Dr. Nunez found that in cases of asthma it was possible to push the drug as high as 40 centigrammes in each dose before any toxic symptoms were produced. In cases of simple bronchitis, however, the effects showed themselves as soon as 5 centigrammes had been reached. From this it is argued that the morbid nerve-centres require higher doses of drugs which affect their function than do the healthy parts of the nervous system. An emetic action, which had been always observed in the treatment by lobelia, was not found to attend the use of lobeline, even in the non-asthmatic cases, where a form of intoxication, coupled with extreme weakening and lethargy, was frequently set up. The action of lobeline is rapid and transient, and hence is best administered in repeated small doses. In its effects upon the nervous system it closely resembles saponin. It is said to produce anæsthesia of the sensory nerves, and to render the vagus insensible to the strongest electrical stimulation, while it exercises a marked depressent effect upon the general muscular system. Dr. Nunez suggests that these effects may hereafter be utilised with good result in the treatment of other spasmodic nervous affections, such as tetanus. Lobeline may be used by subcutaneous injection, but is best administered by the mouth in the form of pills for adults, and combined with syrup of gooseberry for children. The dose, which cannot as yet be determined with certainty, may range between 5 to 40 centigrammes. The susceptibility of individuals has been found to be very various, hence it is advisable to commence with a small dose in all cases. A series of cases giving the details of the administration of the drug and its effects is appended, the results tending uniformly to the same conclusion—viz., the complete cure of the asthma.

E. CLIFFORD BEALE, M.B.

ARTICLE 1982.

Are Venomous Snakes Auto-toxic? By Surgeon L. A. WADDELL, M.B. Scientific Memoirs by Medical Officers of the Army of India, 1889.

FINDING that there was much divergence of opinion amongst the recognised authorities as to whether snakes are proof against poisoning by their own venom, Dr. Waddell undertook a series of experiments with the view, if possible, of settling the question. The serpents operated upon were all healthy, and had been caught within the previous two to seven days. In the experiments the venom was extracted in the usual Indian way by causing each cobra to bite through a strip of dried palm leaf stretched across a spoon or valve of a mussel shell, and during the process of injection the serpent was secured by a noose round the neck after the manner recommended by Weir Mitchell. The result of these experiments was to prove conclusively that the cobra is practically, if not wholly, insusceptible to the toxic action of its own venom. A further outcome of his experiments was to show that the venom of the cobra is practically inoperative upon the majority of the other venomous snakes, but that on innocent snakes the cobra venom invariably proves more or less speedily fatal. Dr. Waddell points out that it would appear that the venomous snake does not secure its immunity through any peculiarity in general structure, or physiology *per se*, nor does the mere possession of an active poison apparatus render the snake immune to the venom of a more highly virulent species. The one striking feature which is uniformly associated with the immunity is the possession of a venom of a degree of virulence and other qualities special to the particular series. Snakes are habitually swallowing some of their own venom, and absorbing small quantities through wounds and abrasions within the buccal cavity. Under these circumstances he asks whether it is not possible that the immunity may be an acquired condition, a toleration to the venom established through frequent imbibition of small quantities of the venom in the modified or attenuated form which the venom assumes when mixed with salivary and gastric juices and absorbed through the alimentary canal.

ARTICLE 1983.

What will Trained Nurses gain by joining the British Nurses' Association?

IN a pamphlet with the above title, Miss Lückes, matron of the London Hospital, criticises unfavourably the scheme for the registration of nurses, called the British Nurses' Association. The object of the pamphlet is to show, in the words of Miss Lückes, 'that the proposed measure of obtaining a charter with the view to establish an authoritative registration of nurses would be detrimental to the interests of the best trained nurses, and that its tendency would be to hinder rather than to advance their professional work.'

The three principal objections brought forward are :—First, that the scheme would lower the present standard of nursing by devoting too much attention to the passing of a theoretical examination at the expense of the cultivating or acquiring the peculiar character and temperament which constitute a really good nurse ; secondly, that it would make it much more difficult for the public to distinguish between first and second or even third-rate nurses, if all were grouped under one head and registered in the same category ; and, thirdly, that convalescent Homes, the establishment of which is one of the minor objects of the association, are eminently unsuited for the recreation of nurses, who, of all people, ought to spend their leisure time of rest from over-work in circumstances more approaching to those of family life, and as far removed as possible from the conditions of an 'institution.' These three headings are amplified and enlarged upon in a very convincing manner, and in a way which leaves the reader in no doubt of the benefits to nurses which the writer considers to belong to the present system of separate training schools.

The pamphlet makes no attempt to undervalue the importance of lectures and examinations, but it points out the fallacious nature of an estimate of efficiency founded on the results of these alone. Nurses are advised and encouraged to work each for her own hospital or training school, and it is pointed out that the existing training institutions are quite sufficient for the double purpose of a registry for the nurses and a means by which the public can distinguish between the different classes of workers. It is finally contended that no outside body, even if fairly representative, could arrange details for all the different hospitals, which, indeed, have no desire to see a uniform standard of aim or practice.

The pamphlet is written in a very moderate tone, although it leaves no manner of doubt as to the views of the writer on the subject.

ARTICLE 1984.

Lectures on Children's Diseases. By HENOCH. Vol. I. Translated from the fourth edition (1889) by JOHN THOMSON, M.B., F.R.C.P. New Sydenham Society.

THIS work in the original form has been received with such universal favour and is so widely accepted as a standard authority upon the subjects of which it treats that the task of a reviewer must be confined to the merits of the translation. This appears to have been very carefully executed and to be unusually free from clumsy German circumlocutions. Readers ought to be very grateful for the conversion of the weights, measures, and temperatures into the systems commonly employed in this country, and for the adaptation of the prescriptions to the terms of the British Pharmacopœia. The translator is modest to a fault, for he does not venture a single criticism upon his author, nor does he furnish any independent notes of his own.

NEW INVENTIONS.

THE 'NET OF HEALTH' SANITARY UNDERCLOTHING.

Our attention has been called to the underclothing bearing the above-mentioned name, the especial form for the weaving of which was suggested to the manufacturers by a London physician some few years since. This make of underclothing is in demand in several hot climates, and amongst many medical men. A thicker make, but woven in the same manner, has also been introduced into Canada with marked success. As its name implies, it is of a very open texture, and its manufacture is based on the opinions of such authorities as Sir Erasmus Wilson, Count Rumford, and Dr. Nichelsen. Mr. J. Macdonald Rogers, F.R.C.S., R.N., writes of this underclothing: 'It appears to combine all that the most ardent hygienic reformer can desire. It is the only kind I have seen that admits of free respiration, and yet is as warm as many of the closely woven garments usually worn. Being perfectly absorbent, it is the most comfortable clothing I know of in which to take exercise.'

The 'Net of Health' is the most open material used for under-garments yet introduced, and is made of cotton, pure wool, and silk, manufactured into combinations for men and women, vests and pants for both sexes, pyjamas, &c. Although very porous, it is remarkably warm in wear, and notwithstanding its gauzy appearance and elastic properties is very durable.

The bands of the pants are made of the purest wool, but of a close texture, as this is necessary to obtain the necessary strength. It is now a generally admitted axiom that it is essential to health to have a layer of warm air kept continually next the skin, a desideratum provided for by materials woven on the principle of the 'Net of Health.' In following the advice of the physician who suggested this material to them, Messrs. Struthers & Co., the makers, of 83 Finsbury Pavement, E.C., place before the public, articles of underwear, for which the steady and increasing demand shows due appreciation.

ANTISEPTIC DRESSINGS.

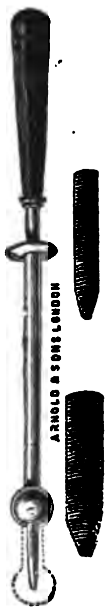
The profession have not been slow in according their unqualified approbation to Mr. John Milne for the excellent manner in which he has carried out Sir Joseph Lister's ideas with regard to antiseptic dressings—originally introduced by that eminent surgeon. Those who remember the objectionable features of the dressings when they were first used will appreciate the great advances that have been made in the manufacture of these important surgical dressings. Although Mr. Milne may be said to possess a monopoly of the manufacture of these appliances in consequence of Sir Joseph Lister having selected him to carry out his ideas, he has placed them at the service of the profession at remarkably low prices considering the care required in their manipulation. The Alembroth appliances consist of the bandage, which possesses all the properties of a perfect surgical bandage. Besides being antiseptic, it is absorbent, elastic, porous, strong, and soft-edged. It is made in 6-yard rolls, 3 inches wide. Gauze, cotton-wool, tampons, and lint form the other Alembroth articles, and all are of a slightly pale-blue colour. His original preparations are carbolic gauze, bandages, tow-tampons, ligature and suture, boracic lint, iodoform gauze, salicylic cotton-wool, protective, and Surg.-Major Bourke's First Field Dressing, prepared from the Alembroth formulæ, but which is now put up without the iodoform, unless otherwise ordered, the dressings having proved more generally useful without it. Surgeon-Major Bourke's dressing is composed of Alembroth cotton-wool, gauze, and bandage, which, possessing no volatile principles, retain their properties for years in any climate. In speaking of the dressing Surgeon-Major Bourke remarks that, should a wound require an immediate washing, an approximate corrosive sublimate solution can be made by simply taking out some of the Alembroth wool from the pad and placing it in water.

The *imprimatur* given to these appliances by their having been prepared under the immediate superintendence of Sir Joseph Lister, added to the moderate prices at which they are supplied, doubtless recommend them in a marked degree to the profession, who appreciate the attendant guarantee of accurate workmanship—a most serious consideration in wound dressings containing mercurial combinations.

At the forthcoming meeting of the British Medical Association at Leeds, Mr. Milne will exhibit about thirty new Listerian dressings.

THE MECHANICAL TREATMENT OF AMENORRHŒA BY A NEW SPIRAL WIRE CERVICAL STEM.

Dr. Duke, F.K.Q.C.P., ex-Assistant Master Rotunda Hospital, Gynæcologist Steeven's Hospital, points out that the mechanical treatment of amenorrhœa by the introduction of a uterine stem to be worn for some time has been frequently followed by good results. The danger, however, of using intra-uterine stems compels the practitioner to be on his guard, and enforces the necessity of the recumbent position on the patient as a general rule. As this becomes exceedingly irksome, more especially in the case of younger patients, sufficient time is seldom allowed to obtain the looked-for result. An uterine stem to be worn with comfort should be flexible—the proper length, so as not to touch the fundus—freely movable, and *require no vaginal support in addition.* The difficulty of making such a stem self-retaining has been clearly shown by the various modifications met with. A properly fitting stem answering to the description already enunciated should also permit of the patient going about as usual, the exercise contributing in no little degree to the desired effect of the stem. Dr. Duke states that he has considerable doubts of the value of the galvanic stem (so called), having tried it in several cases, and is persuaded that the same good would accrue from the use of *any foreign body in the shape of a stem pessary.*



The bugbear of mechanical interference in these cases has often led to dire results, the patient drifting into a state of chronic invalidism. Having fully determined that there is no suspicion of pregnancy, the stem can be introduced by touch alone, while the patient reclines either on the side or back, and no alarm need be occasioned in the patient's mind.

The uterine stem Dr. Duke now recommends is formed of spiral wire, which he originally designed for the purpose of keeping the os and cervical canal patulous after the operation of division for stenosis, and which has as yet given him every satisfaction. These stems are sold by Messrs. Arnold & Sons, of West Smithfield, London, and are made in various sizes, so that if a proper one be chosen and introduced by Dr. Duke's sliding repositor the patient can go about as usual, and be quite unconscious of wearing anything. He does not, however, advocate the indiscriminate use of the stem as a cure for amenorrhœa in all cases, but only in those where the usual orthodox treatment has been previously tried and failed, and where the symptoms complained of are such as to warrant mechanical interference.

The stem should be fully introduced its entire length into the cervical canal, and Dr. Duke finds that the spring introducer lately introduced by him is the most convenient instrument for placing one *in situ*. The base of the latest form of stem being flat and very light, the vaginal walls embrace it closely, and in such a way as to prevent its expulsion. Having experienced its value, the inventor can confidently recommend it.

NEW PREPARATIONS.

NEW TABLOIDS.

MESSRS. BURROUGHS, WELLCOME, & CO. have forwarded us samples of several important formulæ which they have recently added to their list of tabloids. These include Papaine Tabloids, each of which contains two grains of this powerful digestive agent, the dissolvent effects of which have quite lately been recommended in the treatment of cancerous growths,[*] and one of which, taken with meals, is a powerful aid to digestion; Borax Tabloids (5 grains), for use as a borax mouth-wash or gargle; Salicin Tabloids, for use in articular rheumatism, &c., in preference to salicylic acid and the salicylates, from the depressing effects of which this (the active principle of the willow-tree) is said to be free. The last of the series is a composite tabloid, containing the materials for an effervescing or 'Thirst' Tabloid, which are very refreshing, and two or three of them dissolved in a little water make a pleasant lemonade 'refresco.'

PATENTS.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37 *Chancery Lane, London, W.C., from whom all information relating to Patents may be had gratuitously.*]

9,697. A complete antiseptic dressing. JOHN MILNE, 47 Lansdowne Gardens, South Lambeth, London, June 14.

9,698. An improved method of putting up ligatures, sutures, capillary drains, and similar surgical and anatomical threads. JOHN MILNE, 47 Lansdowne Gardens, South Lambeth, London, June 14.

9,699. A padded bandage. JOHN MILNE, 47 Lansdowne Gardens, South Lambeth, London, June 14.

9,700. A belted wound pad. JOHN MILNE, 47 Lansdowne Gardens, South Lambeth, London, June 14.

9,827. An improvement in the manufacture of paper conical packages for pills. THOMAS CHILD, 84 Wellington Road, Leeds, June 15.

10,112. Improved means for securing surgical and other instruments to their handles. WILLIAM SCHOTT, 45 Southampton Buildings, London, June 20.

10,130. A new or improved medicinal preparation or substance. JOHN T. TRENCH, 9 Westland Row, Dublin, June 21.

10,217. An improved liniment or embrocation. HERBERT F. JULEENE, 53 Chancery Lane, London, June 22.

10,765. Improvements in apparatus for applying medicated and other powders. WILLIAM J. KEEFE, 45 Southampton Buildings, London, July 3.

10,922. An improved truss for the relief of hernia. WILLIAM CARTER, 53 Chancery Lane, London, July 4.

SPECIFICATIONS PUBLISHED.

9,551. BOULT (Hennig). Medicine bottles, &c. 1888. 8*d.*

4,764. FRY. Medical galvanic batteries. 1888. 8*d.*

9,488. MASTERS & MASTERS. Artificial legs. 1888. 6*d.*

6,426. FARN. Liniment for rheumatism, &c. 1889. 4*d.*

2,274. HOSKINS. Hospital beds. 1889. 11*d.*

The above specifications published, may be had of Messrs. Rayner & Cassell, Patent Agents.

GOSSIP.

A Medical Press Association.

AN association 'for the protection of the interests of the medical press' has recently been founded in Paris. The following is the list of original members of the Association, who must be doctors of medicine, and proprietors, managers, or editors of medical journals :—MM. Auvard, representing the *Archives de Tocologie*; Bardet, *Les Nouveaux Remèdes*; Bottentuit, *France Médicale*; Bouchut, *Paris Médical*; Bourneville, *Progrès Médical*; Cadet de Gassicourt, *Revue Mensuelle des Maladies de l'Enfance*; Cézilly, *Concours Médical*; Charcot, *Archives de Neurologie*; Cornil, *Journal des Connaissances Médicales*; Doléris, *Archives Nouvelles d'Obstétrique et de Gynécologie*; Dujardin-Beaumetz, *Bulletin Général de Thérapeutique*; Duplay, *Archives Générales de Médecine*; Galezowski, *Recueil d'Ophthalmologie*; Gougenheim, *Annales des Maladies de l'Oreille et du Larynx*; Huchard, *Revue Générale de Clinique et de Thérapeutique*; Joffroy, *Archives de Médecine Expérimentale*; Laborde, *Tribune Médicale*; Landouzy, *Revue Mensuelle de Médecine*; Lereboullet, *Gazette Hebdomadaire de Médecine et de Chirurgie*; Le Sourd, *Gazette des Hôpitaux*; Lucas-Championnière, *Journal de Médecine et de Chirurgie Pratiques*; A. J. Martin, *Revue d'Hygiène*; Mary-Durand, *Courrier Médical*; De Maurans, *Semaine Médicale*; Nicaise, *Revue Mensuelle de Chirurgie*; Panas, *Archives d'Ophthalmologie*; Pengrueber, *Bulletin Médical*; De Ranse, *Gazette Médicale de Paris*; Richelot, *Union Médicale*; Ch. Richet, *Revue Scientifique*. From this list, which by no means exhausts the periodical medical literature of France, it will be seen that medical journalism flourishes more luxuriantly among our neighbours than on this side of the Channel. It must be remembered, however, that their journals are, as a rule, very small, and are in several instances little more than the organs of the distinguished physicians or surgeons who conduct it. No foreign journal can compete with the *Lancet* or the *British Medical Journal* either in size or in variety of matter. Possibly, however, they are on that account all the more carefully read by their subscribers; it is not many years ago since the two great English medical journals were popularly known in the profession as 'the great uncut.' The management has now in each case saved readers the trouble of cutting the pages; but in respect of their size the hypertrophic process continues unabated.

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[*] See p. 262. *A Suggestion for the Treatment of Cancer.*

Chinese doctors.

TCHENG-KI-TONG, a high military mandarin, has been edifying the world with some remarkable illustrations of the esteem in which native physicians are held in China. One of them having advertised that he had an infallible remedy for curvature of the spine, a hunchback applied to him and asked if he could straighten his back. The doctor undertook to do so, and placed the unfortunate patient on his back on a flat board. He then placed a similar board on his chest and abdomen, and loaded it with heavy weights and stones. The result of this novel orthopædic surgery was that the patient was straightened out so effectually that he died on the spot. The quack claimed his fees on the ground that he had kept his promise; the bargain was that he should straighten his patient's back, but nothing had been said about his life! In China, it appears, the distinction between physicians and surgeons is more sharply defined than with us, and every man is expected to stick to his own branch of the profession. A rich merchant was struck by an arrow, which remained fixed in the wound. The principal surgeon of the place was sent for, and after insisting on pocketing his fee in advance cut off the projecting end of the arrow, leaving the point buried in the patient's body. On being asked to extract it, he said medical etiquette would not allow him to trespass on a brother practitioner's province; the arrow being inside the body, the case was clearly one for a physician! An old Chinaman gave the following practical advice as to how to find the most eminent doctor in a strange place:—'Count the number of ghosts crouching about the doctor's doorsteps; the one most in vogue has always the largest number.'

Organisation of Flying Field Hospitals.

THE Empress Augusta having offered prizes for the best scheme for the internal arrangement of a field hospital, easily transportable from place to place in a campaign, an exhibition of models and plans was held at Berlin in the middle of June, under the auspices of the German Red Cross Society. The jury, which was international in character, did not award the first prize of 10,000 marks, but gave prizes of 2,000 marks each, with a gold medal bearing the portrait of the Empress, to Messrs. Christoph, Doogs, & Goldschmidt, of Berlin; Mr. Arthur Trehern Norton, Surgeon to St. Mary's Hospital, London; Captain Tomkins, of Caterham, Surrey; and Dr. L. Gutsch, of Carlsruhe; silver medals and prizes of 1,000 marks to Dr. H. F. Nicolai, of Berlin, and Mr. Carl Prinz, of the firm of Strubecker & Holluber, of Vienna; prizes of 1,000 marks to R. Peters and Dr. Haase, of Berlin; and silver medals to Messrs. R. Cohn & H. Schlesinger, of Berlin; Mr. Weber-Falkenberg, of Berlin; Dr. von Hase, of Hanover; Messrs. Enseberg & Heusner, of Dresden; M. Walter Biondetti, of Basle; and Mr. J. Odelga, of Vienna.

First Meeting of the German Dermatological Congress.

THE first Congress of the German Society of Dermatology, which was held at Prague on June 10, 11, and 12, was a brilliant success. It was attended by all the leading dermatologists of Germany, Austria, and Hungary—Professors Kaposi, Neumann, and Ehrmann of Vienna, Arning and Lipp of Prague, and Pick of Prague being present among others. Much good scientific work was done, the subject of leprosy occupying a prominent place in the discussions. It was pointed out by Dr. Arning that the famous case in which the disease is said to have been successfully inoculated in a condemned criminal at Honolulu is not conclusive as to its transmissibility in that way, as neither heredity nor endemic influence could be absolutely excluded.

Modified Pasteurism and its results.

DR. BAREGGI, who has been in charge of an anti-rabic establishment at Milan for some time past, has from time to time published the results of his preventive treatment of hydrophobia. He employed a method differing in some particulars from that of M. Pasteur. In general terms it might be described as more 'intensive.' Dr. Bareggi also professed to be able to diagnose the disease, and to prognosticate its onset or the reverse from an inspection of the animal's or patient's blood. A short time ago, five cases which had been under his hands died of hydrophobia; Dr. Bareggi thereupon had the candour to confess that he had been on the wrong track, and that he ought to have scrupulously followed in the footsteps of the master. It was stated in the lay press (*Le Matin* and *Daily News*) that the method which had produced such disastrous results had been learned from Dr. Jaime Ferran, of Barcelona, whose 'anticholeraic' inoculations made him so notorious a few years ago. Dr. Bareggi has, however, written to Dr. Ferran a letter which that gentleman has published in the *Independencia Medica* of Barcelona, of July 4, in which he states that the method he has been using is not the same as Ferran's. Bareggi's failure appears, so far as can be gathered from his own words, to have been due chiefly to the fallacy of his diagnosis founded on the microscopic appearances of the blood. Persons whom on this ground he pronounced free from all danger of hydrophobia were dismissed without further treatment. Of the five fatal cases four belonged to this category. Ferran, on the other hand, affirms that of the 512 persons whom he has treated in his laboratory at Barcelona only one has so far died of hydrophobia. He calls his method 'supra-intensive.'

An international scientific language.

THE want of an international scientific language makes itself more and more keenly felt as science extends. The labour of learning several different languages absorbs time which the eager scientific investigator can ill spare. The American Philosophical Society has proposed that the question of the creation or adoption of an international scientific language should be considered at a Congress which is to be held this year at Paris in connection with the Exhibition. The Société de Médecine Pratique has taken up the question, and a Commission consisting of representatives of the principal scientific associations in Paris was appointed to study the matter. The Société Zoologique has announced its intention of supporting the adoption of a living language for international scientific use. Till such time as the particular language is decided on, it suggests that scientific works should be written in Latin. It sets its face absolutely against Volapük. The Commission of the Société de Médecine Pratique will recommend the adoption of French as the language of science. Its only possible rival is admitted to be English, which, however, is rejected on account of the alleged difficulty of the pronunciation. The suggestion that Latin should be used as a stopgap is likely to cause consternation in many scientific breasts. Poor scholars will have a fine time of it as translators of scientific treatises. Did not even Sydenham have his 'classical' works put into Latin for him?

A Royal Ophthalmologist.

THE Archduke Carl Theodore of Bavaria, as is well known, is a doctor of medicine and a skilful and enthusiastic eye surgeon. At Meran last winter he treated a large number of poor patients suffering from affections of the eye, of course without fee or reward other than the gratitude of those whom his skill relieves. Up to Whitsunday he had treated 1,061 sufferers; in 95 of these cases he performed operations, 68 of them being for cataract. They were all completely successful, as was to be expected condsidering the experience of the operator, for only the other day His Highness performed his one thousandth operation for cataract. The Archduchess acts as nurse, and the Archduke is assisted by Dr. von Zenker.

THE number of students in the medical faculties of

Medical Students Abroad.

Austria last winter semester was 5,666, being about 45 per cent. of the total number of students in all faculties. The medical students were apportioned among the different Universities as follows: Vienna, 2,648; Prague, 1,714 (Bohemian University, 1092; German, 622); Cracow, 521; Gratz, 522; Innsbrück, 261. In the University of Berlin 4,936 students were registered in the current summer semester. Of these 1,186 are students of medicine, not including 264 students belonging to the various Army Medical schools. There are 103 teachers in the Berlin medical faculty. In Italy the total number of medical students in the various Universities is 5,498, besides 1,697 students of pharmacy, 28 of 'minor surgery,' 680 midwives, and 151 students of veterinary surgery. In 1887-88 the Paris faculty numbered 3,782 students of medicine, and 1,078 of pharmacy.

LITERARY INTELLIGENCE.

A new dermatological journal has appeared in France under the title of *Journal des Maladies Cutanées et Syphilitiques.* Dr. Henri Fournier is the editor, and among his collaborators we notice the names of several prominent French specialists, besides those of Mr. Alfred Cooper, of London; Dr. von Dühring, of Hamburg; and Dr. Pauly, of Wiesbaden. A review of the medical and medico-legal sciences has recently been established in Spain, under the title of *La Clinica.* It is published at Valladolid, the ancient capital of Castille, under the editorship of Dr. Sanchez Herrero. The literary activity of Spain is further shown in the appearance of another new periodical, the *Revista de Antropologia Criminal.* The editor is Dr. Anget y Sallilaset. The first number contains articles by Professor R. M. Picavea on New Aspects of Criminality; Dr. F. Puglia on the Death Penalty and Criminal Anthropology; Professor A. Burrieza on the Gordian Knot of Criminal Anthropology; Professor A. Sali on Tattooing in Spanish as compared with Italian and French Criminals; Dr. S. Herrero on Responsibility in Cases of Suggestion. The first number of a new periodical called *Archives of Surgery* has just appeared. It bears the honoured name of Mr. Jonathan Hutchinson on the cover. In a brief preface he sets forth that he has a large stock of observations taken from his note-books which he proposes to publish periodically. It is not intended that the issue of the *Archives* shall continue beyond three or four years. The periodical is to appear quarterly and will contain four coloured illustrations in each number. The contents of the first number are as follows: Records of Intestinal Obstruction; Three Cases of an Aggressive Cachexia in association with a Scar-leaving Eruption; Diseases of the Eye; Diseases of the Ear; Syphilis; Diseases of the Skin; Injuries and Diseases of the Nervous System; Cures, Schemata of Treatment, and General Therapeutics; Miscellaneous Memoranda; Quotations; Notices and Reviews; Catechism of Surgery, with Cases for Diagnosis. The coloured illustrations represent congenital papillary streaks and a severe case of iodide of potassium eruption. The periodical is well got up, with clear, readable type, and the illustrations, besides their scientific value, have considerable artistic merit. The Catechism of Surgery, which deals with such various matters as the Sources of Vaccine Lymph; Uses and Abuses of Splints; Hæmorrhoids, Concussion of the Brain, &c., is likely to be a specially useful feature of the new publication. An old treatise of anatomy, written in Latin in the year 1304 by Henry de Mondeville, body-surgeon to Philippe le Bel, and professor of anatomy and surgery at Montpellier and Paris, was recently discovered in the Royal Library at Berlin. This rare work, which has never been printed, throws light on the teaching of anatomy and surgery at a period concerning which very little is known in medical history. Mondeville was in England at one time as an army surgeon and died in 1318. A new medical journal has recently appeared in Italy under the name of *Rivista Generale Italiana di Clinica Medica.* Its editor is Professor Grocco, of Pisa, and its object is 'to gather up into one periodical all our good harvest of clinical medicine.'

A seventh edition of the Austrian Pharmacopœia will shortly appear. The new edition of the German Pharmacopœia is still in the hands of a revising committee.

The *Breslauer ärztliche Zeitschrift* appeared for the last time on June 29. Since the suicide of Professor Gscheidler in the early part of the year, it has been found impossible to find a suitable person to succeed him in the editorial chair.

The *Edinburgh Medical Journal* includes an interesting article by Mr. Lawson Tait, to be continued, on the 'Pathological Importance of the Broad Ligaments.' Dr. James Foulis contributes a paper of some importance 'On the Only Way of Raising the Tongue, the Epiglottis, and the Aryteno-epiglottic Folds at One and the Same Time,' also to be continued. It bears on the important question of the treatment of dangerous symptoms during the administration of anæsthetics, and is illustrated by diagrams. The practice of bringing out important papers, like Dr. Foulis's and Mr. Tait's, in two or three parts, is not to be encouraged, but is rendered necessary by the exigencies of journalism. Dr. A. G. Miller's 'Two Suggestions for Improving the Operation of Excision of the Knee-joint for Strumous Disease' remind us of days when the merits of that operation were so keenly debated. Dr. Miller cuts through the extensor tendon a little above the patella, and also through the aponeuroses of the vasti. This enables him to dissect away the diseased synovial membrane with facility, although the process is slow. To avoid a redundant flap, he cuts so as to leave an elliptical piece of integument on the parts which are excised.

Macmillan's Magazine for July contains one article, 'The Nemesis of Sentimentalism,' which treats of romanticism and 'Zolaism' in fiction, and includes matter of interest to the psychologist. Professor Goldwin Smith's 'Progress and War' is of more importance, medically speaking. The learned Professor believes that the expense of efficient field surgery, which the democratic conscience demands, serves as a check on war. 'In the Austrian armies, during the last century, there were very few surgeons. The medical and hospital arrangements of the Federals in the Civil War were of the costliest and most perfect kind.' The author holds that the unpicturesque character of modern warfare, especially at sea, cools any warlike propensity which may remain in the popular instinct. Nevertheless, whenever coasts have to be attacked or defended, the best kind of navy will be required, and men will ever be ready to man the ships. The sentiment which once induced many a fine lad to go to sea and risk his life on a *Royal Charlotte*, 100, or a *Thunderbolt*, 74, might make the modern youth of seafaring tastes prefer clippers and the merchant service to ugly ironclads and the Royal Navy. Still, the newer phase of that sentiment would not prove very dangerous in actual war.

In the *Gentleman's Magazine*, Mr. Goddard Orpen writes a fascinating article on 'The Isles of Aran' (*sic*), off Galway Bay. As the rainfall is scanty, considering the geographical position of the islands, and the archæology interesting, we suspect that hotels will at no distant date be set up in Aran.

THE ELECTIONS FOR THE COUNCIL OF THE COLLEGE OF SURGEONS.—The result of the elections is not so surprising as would appear at first sight. The body of Fellows, aided by the medical papers, have long agitated for a reform in the system of voting. Country Fellows felt at a disadvantage as long as voting in person was compulsory. They complained that the Council in reality represented the London medical schools, and not the entire company of surgeons who held the Fellowship. They argued that matters must remain so unless proxy-voting or voting-papers came into force. They maintained that no ardent advocate of reform, and few gentlemen representing the provincial and the general practitioner interest could get into the Council. At length, voting-papers came into force, though not until this year's election. The principle of voting-papers is simple enough; they entail less trouble than the proxy-voting. On July 4 no less than 424 valid papers were put into the ballot-box by the secretary of the college, whilst the ballot was going on. 308 of these papers were sent by Fellows residing beyond the metropolitan postal district. When we bear in mind that the total number of votes last year did not exceed 180, it is not surprising that many expected a marked change in results.

What really occurred is now well known. Three gentlemen representing the London schools interest were elected by an overwhelming majority. Precisely 600 votes were polled, only 6 being invalidated. Of the successful candidates Mr. Christopher Heath headed the poll, being re-elected by 397 votes. Mr. Hulke came next, having received only 12 votes less than Mr. Heath. Mr. Howse, the third successful candidate, followed with 241 votes. He was 61 votes ahead of Mr. Rivington, the first of the unsuccessful candidates, who gained 180 votes. Mr. Tait received three less. Mr. Tweedy, an indefatigable reformer, with associations which might have made him acceptable to Londoners and provincials alike, obtained only 145 votes, including but two plumpers. Mr. Steele (99 votes), and Mr. Cowell (51) came last in the list.

Thus the Fellows have made use of their new privileges by electing the very men who most essentially represented the old order and the old interests. The rejection of Mr. Tweedy is very hard to explain, and most discouraging to disinterested reformers. Close analysis of the votes will only confirm the deliberate character of the voting. The result was not merely turned by the London medical school voters, for 424 Fellows, including 308 provincials, voted by papers; yet the votes accorded to Mr. Rivington, Mr. Tait, and Mr. Tweedy were respectively 180, 177, and 143. Thus any attempt to 'vote solid' for these three gentlemen, pledged to reform, must have been but feeble. The voters who came up in person to the ballot-box did not exceed 176, and included a considerable number of Fellows who are not likely to have voted for all the three winning candidates. In short, the voting-papers carried the day for Messrs. Heath, Hulke, and House.

Still, the explanation is probably simple. Faith and sentiment are very powerful agents in elections, especially when their only opponent is a vague sense of personal dignity and interest. The medical schools represent faith and sentiment; they swarm with newly-fledged Fellows between the age of twenty-five and thirty-five, who believe in the intrinsic value of the letters F.R.C.S., and who think that their staff is better than any other staff, and that, if they have not a candidate from their own school, they should vote for a candidate from another metropolitan school. This faith and sentiment is clearly almost as strong in provincials. The College and the Council-voting remind them of their student days and their medical school and the great London surgeons. They feel that after all they are Fellows, the aristocracy of the profession, so they must vote for 'big men.' This sentiment has evidently exercised an enormous influence. Against it were arrayed the journalists; but it is at present the fashion to abuse journals without reading their leading articles on college politics. Besides, the provincials saw no prospect of any personal gain of material profit or influence. The inducement to support a candidate living in a provincial town was clearly less than the inclination to vote for an old hospital teacher. Hence the result. The medical schools have carried the day. The attempt to favour the Members' claim did much harm to the association of Fellows. Henceforward the Members will not look to the Fellows for assistance.

The Members of the College will look upon the recent elections in a different light. By the party of progress among the Fellows, they understand those who are ready to sacrifice some of the privileges of the Fellowship in favour of the Members. The Fellows who supported the winners represent, in the opinion of many Members, the old party who desire to keep the privileges. Now nearly half the Fellows abstained from voting, and the highest vote mustered for a non-progressist was under 400. Hence, in the Members' opinion, it does not appear that the body of Fellows care about maintaining their exclusive privileges.

IDLENESS AND INSANITY.—A Boston contemporary says the necessity of labour for human happiness is at present strikingly shown in the state prisons of New York. Owing to some neglect of the Legislature, the convicts are left without employment. The result is a great increase in insanity. One of the physicians recently resigned, giving as a reason that constant idleness would produce a condition of misery that he would be powerless to alleviate. Besides, as men are constantly becoming insane, the danger to keepers, physicians, and attendants greatly increases. While kept at work comparatively few become ill, and only occasionally does one become insane. Idleness has filled the hospital, and an average of three every week become unmanageable and are sent off to the insane asylums.

AT a recent meeting of the Société Médicale des Hôpitaux, Dr. J. Comby read a paper on the liability to contagion involved by the present system of attending to outdoor patients, especially children. He concludes (1) that the arrangements in force in the out-patient departments of children's hospitals leave much to be desired in so far as the transmission of contagious diseases is concerned; (2) that it is imperative to construct additional waiting-rooms for children suspected to be suffering from infectious diseases; (3) that in the meantime a medical officer should be delegated for the purpose of making a selection of the cases, allowing only children recognised to be free from contagious disease access to the common waiting-room.

AT the last meeting of the Medico-Psychological Association of Great Britain and Ireland, it was decided to ask the members to express their opinions on the subjoined points and to return them to the Secretary, Dr. G. H. Savage, 3 Henrietta Street, Cavendish Square, W., at their earliest convenience for the consideration of the Pensions and Parliamentary Committees:—1. Are you dissatisfied with the clauses as to pensions in Mr. E. S. Norris's Bill now before Parliament? 2. Do you agree with the proposal of the quarterly meeting that officers and servants of asylums should be placed, as regards pensions, on the Civil Service scale, but that they should be allowed to retire at fifty instead of sixty years of age, in consequence of the nature of their work—if paid out of the maintenance charges; but that other officers should be eligible for voluntary retirement only at sixty? 3. Have you any special points to bring out in reference to pensions?

NOTICE OF MEETING.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE annual meeting will take place on July 25, 1889, at the Medical Society's Rooms, Chandos Street, Cavendish Square. Council meeting at 10 A.M. At 11 o'clock, general meeting for receipt of reports, election of officers, for general business, and consideration of the proposition of Dr. Whitcombe: 'That the Council of the Medico-Psychological Association be empowered to grant Certificates of Proficiency in Nursing after examination, and that a Committee be formed to make arrangements for carrying this into effect.' Proposition by Dr. Yellowlees: 'That in nomination by Council for election of office bearers more than one name be submitted for the office of President.' At 2 o'clock the presidential address, by Dr. H. H. Newington, will be given, followed by a paper by Drs. Dodds, Strahan, and Greenlees, on 'Assistant Medical Officers in Asylums: their status in the Speciality.'

The annual dinner will be at The Ship, Greenwich, at 7 P.M. sharp. Price of tickets, £1 1s. Members intending to be present are requested to send their names to Dr. Paul, Camberwell House Camberwell.

The London Medical Recorder.

ARTICLE 1985.

MONTHLY MIRROR OF MEDICAL SCIENCE.

MEDICINE.

Coexistence of diabetes in husband and wife.

AT a meeting of the Société Médicale des Hôpitaux of Paris on July 26, Dr. Debove presented a communication on the comparatively frequent existence of diabetes in husband and wife at the same time. In a series of fifty cases which had come under his observation, this had occurred five times. A similar coincidence had been noted by M. Lécorché, who thought it might be explicable either by similarity of diet, or by both patients sharing each other's anxieties. M. Debove, however, asks whether the fact is not suggestive of contagion, but, till more facts are accumulated, he refrains from formulating any theory on the subject. In the discussion which followed, instances of the coincidence in question were cited by Drs. Rendu, Gaucher, Letulle, Labbé, Dreyfous, and others.

Morphine in the treatment of chronic uræmia.

Dr. Stephen Mackenzie* has recently placed on record two cases of chronic uræmia in which he used morphine with advantage. In the first case, a woman aged 38, there was great œdema of the legs, ascites, and breathlessness. The urine had a specific gravity of 1012 to 1018, and contained from one half to two-thirds of albumen. She suffered much from headache, and had frequent attacks of severe dyspnœa, in which nitrite of amyl, alcohol, ammonia, and ether were given without effect. During one of these, one-sixth of a grain of morphine was injected hypodermically. In a few minutes the dyspnœa became less urgent, and the heart's action slower and stronger. In twenty minutes she was able to lie down, and in a few hours she was in her usual condition.

Subsequent attacks of dyspnœa were relieved by doses of ten minims of liquor morphinæ hydrochloratis or ten to fifteen minims of liquor morphinæ bimeconatis, given by the mouth, or by one-sixth of a grain of hydrochlorate of morphine injected beneath the skin. 'None of the attacks, however severe, resisted the injection of one-sixth of a grain of hydrochlorate of morphine. This was used three times with the best effects. Liquor morphinæ hydrochloratis and liquor morphinæ bimeconatis were administered eight or nine times by the mouth. On no occasion were any toxic effects of morphine observed.' In the second case, a woman, aged 28, there was considerable anasarca; she passed about four ounces of urine daily of specific gravity 1010, and containing one-third albumen. She suffered much from breathlessness, with headache, nausea, and irregular action of the heart. Ordinary treatment doing little or no good, ten minims of liquor morphinæ hydrochloratis were given and repeated in three hours. Rapid relief of the symptoms followed. This method of treatment was repeated on several occasions, always with the best results. It is not claimed that the treatment is curative, and in fact both the patients referred to died; in each case, however, the distressing dyspnœa was effectually relieved, and the sufferer's comfort greatly promoted by the morphine, nor was there any untoward after-effect. Dr. Mackenzie maintains that these cases prove that, contrary to what has hitherto been the generally accepted doctrine, morphine may be given in some cases of Bright's disease with safety. He thinks it probable that in such cases morphine has a directly antagonistic effect to the uræmic poison, whatever that may be. Its specific action in relieving breathlessness he suggests may be due to its power of unlocking the spasm of the pulmonary arterioles or bronchioles, to which the symptom is probably due. It should be noted that Dr. Mackenzie does not advocate the employment of morphine to the exclusion of other modes of treatment of recognised efficacy in Bright's disease, nor does he recommend its indiscriminate use. 'In the light of the asserted susceptibility of patients with disease of the kidneys to the toxic effect of opium, it will be given with eyes open to its danger.' Both the cases mentioned above were in a very advanced stage of the disease; in less severe cases better results have, according to Dr. Mackenzie, been obtained.

Insanity following mumps.

Dr. R. Percy Smith, Medical Superintendent of Bethlem, has recently called attention * to the occurrence of insanity as a sequela of mumps, giving two illustrative cases which came under his own notice. A lad, aged 19, had had good health previously, and there was no neurotic family history. A fortnight before admission he had suffered from mumps, which was epidemic at the time in the district. The attack was complicated with exhausting diarrhœa. Five days before admission he became excited and passed into a condition of acute mania, from which he rapidly recovered in Bethlem. The other case was that of a young medical man, who, after an attack of mumps complicated with severe orchitis, became depressed, suspicious, and suicidally inclined. He recovered after a time, without its having been necessary to send him to an asylum. Dr. Smith thinks that in each of these cases the extreme exhaustion caused by the complication of diseases had more to do with the induction of insanity than fever or metastasis.

Treatment of chorea by prolonged sleep.

Dr. H. Charlton Bastian has lately recorded † a case which strikingly shows the value of complete rest, such as is found in deep and prolonged sleep, in the treatment of certain severe cases of chorea. The method is founded on the well-known fact that almost invariably choreic movements are arrested during sleep, a circumstance which proves that the disordered actions of the nervous centres, on which these movements depend, are also suspended. By greatly prolonging this period of rest the mischief done to nerve-centres by the maintenance of incessant and unnatural activity is cut short, and an opportunity is given for the gradual abatement of the functional perversion in certain parts of the nervous system (wheresoever situated), which is the primary cause of the malady. The patient was a girl aged 20, who, five years before coming under notice, had had a great shock. This was followed by extreme weakness, and two years later by fits of unconsciousness, as to the exact nature of which no definite information could be obtained. Nine months before coming under Dr. Bastian's care choreic tremblings came on after unwonted bodily fatigue, accompanied by religious excitement. For this she was treated with considerable success, but after a long railway journey the chorea came on again as bad as ever. The movements affected both hands and arms, as well as both legs. On trying to stand or walk (which was hardly possible even with assistance) the movements became general and very violent, even the head being moved up and down by the neck muscles. The movements never stopped at any time when she was awake, but during sleep they ceased entirely, though once or twice a slight tremor was noticed. Headache was almost continuous, and, though the history was suggestive of a hysterical element in the case, there was a total absence of anæsthesia, rigidity, or paralysis. Treatment was begun on Feb. 27, a mixture containing liquor arsenicalis, bromide of potassium, and spirits of chloroform being given three times a day, with a five-grain pill of aloes and myrrh every morning. On March 4, as there was no improvement, 20 grains of chloral hydrate and 10 grains of bromide of potassium were ordered, to be repeated on awaking; the patient to be allowed to remain only half an hour awake at a time for the administration of nourishment, and the sleeping draught to be given as seldom as possible. At first the draught was required every four hours; later on, the patient sometimes slept eight hours at a stretch, but on an average she took the draught every six hours. Every effort was at the same time made to keep her perfectly quiet and in every way to favour the continuance of sleep. Her food was about a pint and a half of beef-tea or mutton-broth, and the same amount of milk, usually with two eggs beaten up in it, during the twenty-four hours. Constipation was prevented by the administration of 45 minims of the liquid extract of cascara every night, followed, if necessary, by an enema in the morning. In her waking intervals the movements of all the limbs became gradually less, but she still complained of headache. Her temperature during this period of sleep varied from 99°·6 to 95°·4; her pulse from 70 to 102, and her respirations from 20 to 52. On March 18 she was allowed to awake, and the movements were decidedly less marked and less extensive. On the 25th sleep was again induced as before, and was kept up for three weeks. The movements during the waking intervals became less and less and the headache was less severe. On April 16 she was again allowed to awake. The movements in the legs were almost entirely gone, and the hands were also much quieter than before. Her mental condition, however, became disturbed; she cried and was depressed, fancying she had committed some great fault. On May 8 she was quite cheerful, and could walk and knit easily. A fortnight later she was discharged with slight tremor in the right hand only. 'During the whole time she was asleep her general nutrition was well maintained; her cheeks and lips continued of good colour; there was no sickness. Her tongue remained quite clean throughout, and she took her food well. The urine and motions were passed into a bed-pan, and there was never any incontinence.' Dr. Bastian states that he has treated eight or nine cases of chorea in this manner during the last twelve years. Some of the cases have been notably improved; other very chronic cases have not derived much permanent benefit. In none of them has any evil resulted from the treatment. The headache in the case above recorded was quite exceptional, and had existed long before the treatment was begun. For its relief the bromide of potassium was combined with the chloral, an addition which Dr. Bastian had never found indicated before. In no other case either had he kept the patient asleep longer than a fortnight at a time, and he is disposed to think that it might have been safer not to keep her under the influence of chloral for the extra week, even though this might have involved another two weeks' sleep, after an interval, for the cure of the chorea. Dr. Bastian adds that in ordinary cases of chorea he never thinks of having recourse to the mode of treatment which has just been described, and in the most acute and severe cases of the disease in which the temperature is raised and the movements are violent and continuous, with or without delirium or maniacal symptoms, he has never tried it, and should not recommend its adoption. It is especially applicable to cases in which there is no fever and no heart-disease, and in which the movements are severe and continuous, and have so continued for months or years without abatement. He attaches little importance to any supposed curative influence of chloral on chorea except through the intervention of the sleep which it induces. Paraldehyde is too nauseous, but sulphonal might prove as efficacious in procuring continuous sleep as chloral. Its great insolubility and slower action, however, would probably involve a distinct lengthening of the interval of wakefulness on each repetition of the drug. This mode of treatment should never be attempted in private practice without the aid of skilled nurses.

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* *Lancet*, Aug. 3 and 10, 1889.

* *Lancet*, Aug. 10, p. 265.

† *Lancet*, July 13, 1889.

A case of bronchial calculus.

Dr. Pasquale Moscato relates * a case in which calculi were coughed up, not from the lungs but from the bronchial tubes. The patient, a healthy woman, aged 30, with an excellent family history, during her first pregnancy suffered from dyspnœa and cough, and the sputa were streaked with blood. These symptoms disappeared after delivery, but four years later, the patient being again pregnant, they returned; this time a calculus of about the size of a small shot, yellowish-white in colour, and flattened in shape, was expelled in coughing. A second calculus was expectorated in the following year, when the patient was not pregnant, and a third the year after (1885) in the first months of another pregnancy. During 1886 there was no repetition of the occurrence, and the woman remained perfectly well, with the exception of slight bronchial catarrh. In April 1887, and May 1888, two other calculi were expelled. On each occasion the event occurred in the course of bronchial catarrh, and was preceded by pain in the left lung, especially severe in the supra-cardiac region. After the expulsion of the calculus this pain gradually disappeared. The calculus expelled in May 1888 was larger than the previous ones, and of irregular shape, with branch-like processes. The woman suffered at the time from fever of intermittent type, and the bronchial catarrh was accompanied by hæmoptysis. On auscultation, both pulmonary apices seemed to be quite

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* *Gazzetta degli Ospitali*, July 31, 1889.

healthy, and there was no dulness over the area of either lung. On the left side, outside the mammary region, crepitant râles were audible, but there was absolutely no physical sign of a cavity. Dr. Moscato believes that the expectorated substances are genuine calculi, not pellets of inspissated mucus, or calcareous concretions. They were analysed by Dr. Russo Giliberti, Professor of Pathology in the University of Palermo, and found to contain traces of albuminoid material, with chloride of lime, chloride of sodium, and chloride of magnesium. Neither uric acid nor oxalate of lime was present, nor were there any carbonates, phosphates, or sulphates. The absence of oxalate of lime differentiated the calculi in this case from those occasionally expelled by patients suffering from asthma. Dr. Moscato thinks the absence of fever and of all physical signs pointing to disease of the lung, together with the small quantity of blood expectorated, negatives the possibility of the calculi having come from the lungs. He maintains that they probably originated in the bronchial mucous membrane, as they are known to do in the lingual, salivary, and other glands, and that the streaks of blood in the sputa were due to the detachment of the calculi. Dr. Moscato believes his case to be unique in medical literature up to the present.

SURGERY.

New method of excising the wrist.

Mr. Edward Thompson, Surgeon to the Tyrone Infirmary, has lately described[*] a method of excising the wrist joint which he believes has not hitherto been recommended. In a case of caries of the carpal bones, in which the disease appeared to be limited to the first row of carpal bones and to the lower extremity of the radius and ulna, he determined to try to save the hand, although the patient, whose sufferings were acute, was anxious for amputation. On the back of the hand, and within half an inch of its ulnar border, there was a large shallow ulcer. The outer edge of this sore was selected as the site of the incision which ran between the tendons of the extensor communis and minimi digiti, and was about four inches in length. The joint was freely opened, so that its interior could be thoroughly examined. A gouge was then introduced, and the semilunar bone gouged completely away; then each of the neighbouring bones was firmly caught with strong forceps, slowly twisted from its connections, and removed. The diseased ends of the radius and ulna were gouged away, and afterwards both bones were sawn across immediately above the seat of disease. A small incision was made on each side of the joint as close as possible to the level of the floor of the joint, and a drainage-tube was inserted. The wound was stuffed with iodoform gauze, and dressed antiseptically. A straight splint was placed under the forearm and hand, the palm being supported on a roller bandage. Recovery was uninterrupted and speedy, and the patient has now a useful hand. Mr. Thompson claims for the method that 'it is easy of performance and free from danger, and that it does not tear or injure any of the tendons, vessels, nerves, or deeper structures. It is quite bloodless, and does not require removal of any portion of bone which is sound and healthy.'

'A new treatment and possible cure for cancer.'

The anonymous correspondent of the *Lancet*, whose suggestion of the combined use of papain and thallin in cancer was noticed in the last number of the LONDON MEDICAL RECORDER, turns out to be Dr. J. Mortimer Granville. He has since supplemented his first statement by a further communication,[*] in which he says that if the solvent or digestive power of the papain is to be brought to bear on the morbid growth, it must not be exhausted by being first mixed with food. He therefore recommends *very frequent* administration of the papain and thallin and their combination in the form of pills. The aim is to get absorption of the drug, not local action on the stomach. In cancer of that organ, Dr. Mortimer Granville gives, besides the pills, papain suspended in water with thallin and an alkali. With the view of further preventing exhaustion of the papain, he directs that the patient shall be fed as exclusively as possible on a vegetable diet, and that the pills shall be taken before meals or in the intervals between them. He has not found that the thallin given as described exerts any injuriously depressing effect on the organism as a whole. The vitality of the morbid growth *seems* (the italics are Dr. Mortimer Granville's) to be depressed by saturation with the thallin and papain locally; this is effected by applying a strong paste of the two drugs in combination, or, where practicable, by their inunction. The results obtained so far are said to be encouraging and 'make it clear that the method will deserve a full and fair trial by the profession.'

GYNÆCOLOGY.

Is there a uterine nerve-centre?

Dr. James Oliver thinks there is a uterine nerve-centre, and he localises it in the medulla oblongata.[†] By way of proof he contents himself with bringing forward 'deductive evidence.' The symptoms associated with pregnancy, which afford evidence of the existence of a generative centre and of its situation in the medulla oblongata, are (according to Dr. Oliver) sickness and cough. All the visceral functions are now performed automatically, and appear to be regulated by nerve-centres lodged in the medulla oblongata. It may therefore be surmised that the uterine functions are governed by an automatic centre. When the uterus becomes the nidus for a developing germinal mass, the waves of motion resulting from segmentation of the ovum are radiated through the agency of the uterus and its afferent nerve-fibres to the uterine or reproductive centre. The disturbances thus produced in that centre are greatly in excess of those usually generated, and the extra amount of motion must discharge itself in some other direction till the uterine centre has become accustomed to the augmentation. The direction which the overflow shall take is determined according to existing nerve communications; and, considering the intimate relationship between the process of assimilation and that of generation, it is not astonishing that the excess of molecular motion transmitted to the uterine centre should be radiated to that governing the nutritive processes generally. Sickness and cough in the pregnant woman may be referred to molecular radiations from the uterine to the pneumogastric centre. In the course of a few months, however, through the agency of labour the pneumogastric centre becomes tolerant. Sickness occurs in the morning, possibly because the change from the recumbent to the erect position may after sleep render the whole nervous system more liable to explosive disturbances.

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[*] *British Medical Journal*, July 20, 1889.

[*] *Lancet*, July 20, 1889.

[†] *Lancet*, August 3, 1889, p. [illegible]

Otology.

Injurious effects of the telephone on hearing.

M. Gellé has recently stated[*] that he has on several occasions observed the injurious effect of the telephone on hearing. This result seems in some cases to be due to the intensity of the sounds, in others to the fatigue caused by the close attention necessary to distinguish them from the other sounds which accompany them. In most cases there is probably some pre-existing disease of the organs of hearing. In a man of great mental power, who was in the almost constant receipt of telephonic messages, there resulted a condition of nervous excitement and auditory hyperæsthesia, especially of the ear with which he was in the habit of listening. This gradually increased to such a degree that the sounds caused giddiness and buzzing, and finally persistent vertigo. The symptoms disappeared under the influence of rest. In a girl, aged 22, employed in a large office where the telephone was in constant use, loud buzzing noises in the ears became continual, and auditory hyperæsthesia was so intense that hearing became acutely painful; the sharp tingle of the signal bell caused pain and giddiness, and a state of mental excitability of which she had shown no sign before. After a time the hearing of the ear with which she was accustomed to listen became much impaired. She was obliged to give up her employment, and, after a period of rest, she recovered almost entirely. In such cases, together with the subjective symptoms—such as painful audition, buzzing sounds, neuralgia, &c.—the practitioner often finds sub-inflammatory conditions of the tympanum which may possibly have been induced by the same cause. If such a case is allowed to run on to what may be called its natural conclusion, the organ of hearing may be permanently destroyed, and the general nervous system become more or less involved.

Article 1986.

THE MAYBRICK TRIAL.

In the amount of public interest that it has attracted the Liverpool poisoning case may claim to rank with the most notorious cases of bygone years, and the name of Florence Maybrick will henceforth deservedly be placed alongside those of such great criminals in the past as Palmer, Pritchard, and Madeleine Smith. In many respects the case which has just terminated resembles the Coachford poisoning case, which created so much excitement in Ireland a short two years ago. Except that in that instance it was the wife who was the victim the moral surroundings of the two cases were remarkably similar. The *post mortem* evidence in each case was unmistakable. Commenting on that case we said 'it is difficult to see how more evidence could have been obtained to connect the prisoner with the crime unless it had been that of someone who actually saw him place the poison in his wife's food or medicine.' The missing link in that case was supplied in the one now under consideration, for the wife was seen to take a recently opened tin of Valentine's meat juice (which fortunately had been previously tasted by the nurse and found to be good) from the bedroom into an adjoining room, and shortly afterwards she returned with it. The nurses took care that no more of it was given to the patient, and when subsequently the contents were analysed the presence of arsenic was revealed. The *post mortem* appearances as described by Drs. Humphreys and Carter consisted of intense vascular injection of the mucous membrane of the stomach, the lesions were most marked at the two ends, and the mucous membrane between the greater and lesser curvature was free from redness; a similar redness was found in parts of the small intestine and in the rectum; the *post mortem* appearances could not, as Dr. Carter very justly observed, be ascribed to anything else than arsenical poisoning, and they are quite inconsistent with death from any so-called natural disease.

Vomiting and pain in the stomach were early but not very prominent features in the case, the patient's chief trouble being the dry and burning condition of his mouth and throat; towards the last tenesmus and diarrhœa were present, but neither these nor the vomiting were severe, so that the symptoms and *post mortem* appearances agreed very well in degree, and their comparative mildness was abundantly explained by the fact that the chemical analysis showed the poison to have been taken or administered in solution. Arsenic was detected in the intestines, liver, and kidneys, but the total amount found was relatively small. It must, however, be pointed out that the amount found in the body after death is no criterion of the amount taken during life, nor of the quantity that would be necessary to destroy life, for it is obvious that some of the poison would be got rid of by vomiting, and some in the stools, whilst after absorption has once commenced there is a constant elimination going on both by the kidneys and through the skin, and we certainly should not expect to find any of the poison in the contents or walls of the stomach when it had been given in solution and its administration had been discontinued some few days before death.

The prosecution was conducted with studied moderation, whilst the defence was made with all the ability that the case permitted of, but the statement which the prisoner obtained permission to make must have weakened her defence in the minds of the jury. Unfortunately for the prisoner two lines of defence were attempted, one that the deceased had died from gastro-enteritis, the other that he had died from arsenical poisoning, the result of his own habit. This latter theory would have been rendered more within the bounds of possibility if the defence had boldly asserted that the arsenic found in the jug at the deceased's office had been placed there by the deceased, instead of adopting the somewhat strained explanation of its presence that was put forward. In regard to the assertion so freely made by many who have taken part in the agitation for a reversal of the sentence, that the deceased was an arsenic eater, we may just observe that no proof of it was given at the late trial. That the deceased was a hypochondriac who was always taking medicine was abundantly shown, but that he was habitually taking arsenic was not proved, and the fact that no arsenic was found in any of the many empty medicine bottles is rather strong negative evidence. It is true that a box of pills labelled arsenic was found, but no importance seems to have been attached to the discovery. There were several points in the conduct of the prisoner incompatible with her innocence, notably her letter to her paramour, in which she stated that her husband was 'sick unto death,' at a time when the possibility of his death had not suggested itself to the mind of his medical attendant. The verdict was fully justified by the evidence, and we are glad that the jury refused to allow mere sentiment to interfere with them in the performance of a most solemn and painful duty.

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[*] *Annales des Maladies de l'Oreille*, &c., July 1889.

Article 1987.

THE EIGHTH MEDICAL CONGRESS AT WIESBADEN.

The following report is summarised from the *Berliner klin. Wochenschrift*, Nos. 18 and 19, 1889.

Herr Immermann (Bâsle) read a paper 'On the Functions of the Stomach in Phthisis Tuberculosa.' Dettweiler had said two years ago that the repugnance shown by consumptives against the so necessary food could often be overcome by expostulation and insistance on the part of the physician, and that there is no real functional disturbance in these cases, only a gastric hyperæsthesia. Experiments on consumptive patients in the Bâsle hospital were made to clear up this question. Leube's test-meal was given to, and Riegel's procedure was also employed with, patients in all grades of phthisis. In every case the test-meal was found digested after six hours, even when there was complete want of appetite, gastric trouble, and high fever. The supposition that the digestive disturbance is wholly subjective or nervous is thus justified. If in the morning the stomach contents were withdrawn an hour after the introduction of two hard-boiled eggs and 3½ ounces of water, the same degree of acidity was found as in healthy people, also the same peptic characters. We ought therefore to be more urgent in pressing phthisical patients to take a proper quantity of food.

Herr Petersen (Copenhagen) read an important paper 'On the Hippocratic Method of Treatment,' or, in other words, 'On Hippocratism.' Although this mode of treatment seemed overdrawn in many respects, many of its principles were still deserving of recognition. Hippocrates' designation of fever as *instrumentum felicissimum* was now seen to be worthy of praise. With Hippocrates the whole man was ill, not one particular organ only; hence specialism was excluded. An extremely individual treatment was adopted, each case being treated on its own (de)merits. The first aim of treatment was not scientific, but sanative, and the chief means were dietetic. The physician was a 'healing artist,' who became such only by unwearied diligence and powerful talent, especially the gift of observation. The whole cultivation was mainly clinical. The French had become more anatomical, while the English remained true to 'Hippocratism.' In Germany, medicine, as directed by Traube, Rokitansky, and Virchow, had departed from Hippocratism; but since then, under the influence of Frerichs and Leyden, seemed inclined to return to it. Modern Medicine must return to the ancient path, or it would be destroyed by specialism.

Herr Dettweiler brought forward a new small expectoration flask, to be carried in the pocket. Cornet, Mosler, and Fürbringer warmly recommended such precautions; Cornet had demonstrated the presence of the bacillus tubercle in the neighbourhood of consumptive patients. Quincke (of Kiel) pleaded for the pocket-handkerchief still.

Herren Ebstein and Nicolaiev demonstrated 'Urinary Concretions Artificially Produced by Feeding Dogs with Oxamide' (an ammonia-derivate of oxalic acid; the other derivate, oxaminic acid, does not cause calculi). Oxamide is white, while the concretions produced were greenish yellow, as is usual in dogs; colouring matter had, therefore, been taken up. The stones were found in the renal pelves, the urethræ, and the bladder, both fine gravel and larger concretions (2 centimètres in length and 0·7 centimètres thick). They were hard, and had the mulberry appearance of oxalate stones. Their sections showed concentric deposition, with no radial fibres. They consisted almost entirely of oxamide and an organic framework.

Herr Klemperer (Berlin) made 'Remarks on Dilatation of the Stomach and its Treatment.' Seventeen cases were carefully examined; in two the acidity was normal, in seven it was increased, and in eight it was diminished. The cases of hyperacidity, in which the motory power of the stomach was preserved, were of nervous origin, but where the motory power was lessened other causes were present. This is not to say that hyperacidity alone can cause ectasis by irritation and spasm of the pylorus, but the 'motory weakness' seemed to be primary. The prognosis is not very favourable, although acute conditions can be entirely cured. In chronic conditions the stomach should be washed out every evening with a little water, and a sufficient mixed diet should be given; fat is important. In the discussion on this paper, Herr Posner (for Professor Ewald) said that acute dilatation did not present the classic symptoms of dilatation, and was amenable to treatment, while the chronic kind, though it might be ameliorated, was never really cured if these symptoms were present. Von Busch deduced temporary dilatation from nervous sources. Both vagus and splanchnic contain stimulating and depressant fibres. Von Ziemssen (Munich) thought that distension of the stomach by CO_2 was very useful in diagnosis, and also did the patient good. A moderate distension (*e.g.* by one and a half drachms of a mixture of sodium bicarbonate and tartaric acid) was too temporary to do any harm, and caused retrogression of the dilatation by the irritation.

Herr Hanau (Zurich) demonstrated 'Carcinoma Artificially Induced by Inoculation.' The inoculations were made from non-ulcerating cancerous masses in the vagina into the tunica vaginalis testis in two rats. In one there ensued extensive cancer of the diaphragm, in the other cancer of the epididymis and gubernaculum. A third rat was infected from these two.

Herr Lauenstein (Hamburg) discoursed 'On the Treatment of Pyloric Stenoses.' The operative methods were mainly three, viz.: 1. Longitudinal incision of the pylorus, with vertical union of the borders of the wound. 2. Formation of a fistula between the stomach and the small intestine. 3. Resection of the pylorus. Out of twenty operations on the pylorus, a fistula was made in nine, and only two patients died from the operation. Resection is only feasible when the strength is good; the operation for fistula was far less severe, and ameliorated the symptoms much. Curschmann thought that carcinoma should not be operated on; Leyden, on the contrary, said that even here the operation was justifiable as a means of prolonging life, and making it more endurable. Both the speakers would only operate in non-malignant cases when every other means had been tried, and life was threatened. In one case the stomach was opened during life, and no stenosis was found; the symptoms were due to gastric crises only. But in cancer, early operation had good results.

Herr Roser Hanau showed a woman whose larynx had been entirely removed last March. She was still very weak, but spoke with a distinct whisper.

Herr Finkelnburg (Bonn) read a paper 'On the Distribution of Tuberculosis in Germany as regards the ground.' Meppen, a purely agricultural district, showed the highest mortality from this disease in all Germany, and the neighbouring parts (in Holland and Oldenburg) were like it in this respect; it was also the most thinly populated. The common factor of these districts is the existence of extensive moors. Other moor-grounds show high phthisis mortality, the sodden subsoil preventing the quick flow of rain-water. Other parts in which the rain-water was only slowly drained away, *e.g.* the mountain slopes of some parts of Switzerland, showed the same high mortality; in fact, high-lying neighbourhoods were unfavourable on the whole, unless the subsoil drained away the rain-water properly.

[This relation is well known in England, especially since Dr. Buchanan's report to the Privy Council 'On the Distribution of Phthisis as affected by Dampness of Soil.']

Von Ziemssen (Munich) explained the various methods of obtaining pulse and heart curves, and their significance. The pulse between complete relaxation and the first heart-sound was shortened by alcohol, and lengthened by digitalis.

Herr Ebstein (Göttingen) read a remarkable paper 'On Gout.' His views are that in gout the neutral sodium urate is formed in excess in the muscles and in the bony marrow, and that it passes along the lymphatics into the venous and then the arterial system, but with difficulty. If stasis occurs to a moderate extent there is functional irritation—*e.g.* malaise, muscular pains, &c.; if this stasis be complete in any part, typical gout ensues. The passage of this substance from the marrow of the long bones took place both by the periosteal and articular lymphatics; in the latter case, of course the deeper part of the cartilage was penetrated first, then the superficial part. Obstruction is easy here, especially in such a distant articulation as the metatarso-phalangeal. The tissues became inflamed in gout; and *if necrosis occurred, then the acid urate was deposited in the centre of the necrosed patch—i.e.* subsequent to the necrosis, never previous to it. All this is in direct opposition to Garrod's teaching. The injurious effects of the local excess of neutral sodium urate cease as soon as the acid urate crystallises out in a necrosed patch; hence the painlessness of tophi. Garrod makes the attack *begin* with an excess of *acid* sodium urate. Artisans' gout is not always associated with kidney changes due to lead-poisoning, as Dickinson maintains, but may be a primary articular gout. In his treatment, Ebstein, while not rejecting colchicum and sodium salicylate for the relief of acute attack, relies on proper dietetic management in the intervals, moderate work, an abstemious life, and means for promoting the peripheral circulation.

Herr Emil Pfeiffer (Wiesbaden) read another paper on the same subject, with the title 'On the Nature and Treatment of Gout.' Pfeiffer makes the skin of great importance in gout. The first tophi are cutaneous, and occurred in regions exposed to slight injuries. The essence of gout lay in a peculiar condition of uric acid—viz., its ready precipitation. The difficultly soluble or even insoluble urate retained in the tissues caused the acute attacks of gout *by its conversion into the more soluble kind*, for this alone caused pain. Injections of dissolved uric acid caused far more pain than undissolved uric acid. The latter only caused pain after an interval of twelve to fifteen hours, and the pain could always be cut short by acids (*e.g.* HCl—phosphoric acid), so that the above assumption was thus borne out. The theory that in gout there is an excess of uric acid is incorrect; there is lessened formation. The extremely diminished excretion in almost or quite alkaline urine are the main diagnostic points in gouty cachexia. In acute attacks the excretion rises considerably; this again is contrary to Garrod's theory. Herr Pfeiffer recommends in the intervallary treatment of gout the Wiesbaden baths, which he asserts have a powerful influence on uric acid excretion, and a course of alkalies. The latter must be taken *Jahr aus Jahr ein*, best in mineral waters (Fachingen, or the Kaiser Friedrich spring in Offenbach A.M.). During acute attack acids should be given. In the discussion hereon, Ebstein considered diminished excretion no proof of diminished formation. Schetelig, of Homburg, supported Pfeiffer.

Herr Krause's (Berlin) paper was entitled 'On the Results of the Most Recent Modes of Treatment in Laryngeal Tuberculosis.' Lactic acid was superior (locally) to iodoform and to boric acid. Cocaine should be used at first, and the lactic acid solution should gradually reach a strength of 50 per cent. Some patients now remained cured two years after this treatment. Menthol and iodol were also useful. Tracheotomy was beneficial, if the lung disease had not too far advanced, but the curette treatment was best, followed by lactic acid applications. A discussion followed.

Herr Leo (Berlin) discoursed 'On the Gaseous Exchange in Diabetes.' The speaker had examined four patients as to oxygen intake and carbonic acid output, by a new apparatus, and no great difference from the normal was found, certainly no diminution of CO_2. This was in opposition to Pettenkofer and Voit in the one case they examined, and was also against Ebstein's theory which made the assumed alteration of gaseous exchange the *vera causa* of diabetes. If a man breathe an atmosphere laden with CO_2, he can increase the CO_2 amount in his blood, but with diabetic persons this experiment caused no diminution of sugar, rather an increase, which again told against Ebstein's theory. In the discussion on this subject Ebstein defended his views. While a lessened output of CO_2 would speak directly for his theory, an increase of CO_2 might possibly be explained on other grounds, though at the moment there might be less CO_2 in the tissues.

Herr Dehio (Dorpat) spoke 'On the Origin of the Vesicular Breath-Sound.' Penzoldt, who placed a distended lung over the larynx of a living man, and auscultated the laryngeal sounds through the lung, heard vesicular breathing, which he therefore considered merely a modified laryngeal sound. But various considerations stood in the way of this theory, and experiments were made by the speaker.

on lungs which had been dehydrated by glycerine injections into the pulmonary artery, and afterwards damped and distended with air in various degrees. The glycerine left the distensibility and elasticity unaltered. Inflation caused almost puerile vesicular murmur, unaltered by damping the air. If when the lung was moderately distended, the bronchus was closed, and then, while auscultating the lung, various parts of it were compressed, a perfect vesicular murmur was heard when the particular part was set free; this experiment showed distinctly that this sound originated in the lung itself, also that it was the movement of the air which caused it, not the tension of the lung (Gerhardt), because the latter was inconsiderable. Since the movement of air can only cause sounds when the lumen of the air-passage is suddenly altered, the place of origin of the vesicular breath-sound must be assumed to be where the bronchioles transide into the infundibula.

Herr Quincke (Kiel) read a paper 'On Swallowing Air,' especially in hysterical and hypochondriacal people. The cause was frequently a 'dry pharyngeal catarrh.' Through projection of the larynx air could easily enter the œsophagus, and enter the stomach rapidly by peristalsis.

Herr von Busch spoke on 'Cardiac Dyspnœa,' Herr Müller (Bonn) on the 'Tissue-changes in Carcinoma,' and Herr Finkler (Bonn) on 'Septococcous Pneumonia.' There were a few more papers. E. J. EDWARDES, M.D.

ARTICLE 1988.

JESSNER ON CREOLIN.

IN the *Deutsche medizinal Zeitung* Dr. Jessner speaks, first, generally of antiseptics, and enumerates six desiderata, viz. (1) an antiseptic must be easily soluble, (2) it must not be too volatile, (3) it must not be poisonous, killing the micro-organisms and the patient at the same time, (4) it must not be corrosive, in order that no harm may be done to the skin, mucous membrane, or instruments, (5) it must not irritate wounds, thus interfering with healing, and (6) though last, not least, it must be cheap. He then considers carbolic acid and sublimate in the light of these six points, and has to pronounce against them as antiseptics, for wounds and internal treatment, because they are both very poisonous and corrosive. Hereupon he devotes his attention to creolin, and proceeds as follows. The bacteriological works of Esmarch and Eisenberg show that a 3 per centum creolin solution is at least equal to a 5 per centum carbolic solution in its antiseptic value. Creolin mixes with water when simply stirred. It forms certainly no solution, but a complete and regular emulsion, which can be therefore made at any moment without any preparation. Creolin is not volatile. Above all, it is not poisonous in the quantities required for treatment of the human body. All experiments have proved this. A cow took 250 grammes and a dog from 30 to 50 grammes without any reaction, without even the appetite being impaired. Dr. Spaeth and others took for a length of time daily doses of 8 grammes of creolin without any bad general symptoms or local consequences. Nay, they observed after a while favourable symptoms, *e.g.* decrease of intestinal gas, inodorous fæces, limitation of the putrefaction processes in the intestine, and the urine stood a long time before ammoniacal fermentation set in. From these symptoms it is clear that there is a wide field for the internal use of creolin. Involuntarily a patient of Dr. Kortüm provided a striking experiment, who by mistake drank 60 grammes of creolin in a 5 per centum solution without experiencing any bad effects. Certainly two *probable* cases of creolin intoxication have been published, but they are by no means proved; and in one of the cases, where a septic puerpera died after syringing with creolin, it is questionable whether the drug was pure, on which everything depends. Neudörffer reports that a dog died into whose blood-vessels he had injected pure creolin. But as Froehner clearly shows, such experiments are valueless, for such a thick foreign substance which is not soluble but only forms an emulsion may cause death by decomposing the blood or in a purely mechanical way. You may kill an animal by injecting distilled water or glycerine into the blood-vessels. Jessner does not doubt that a man may be poisoned with creolin, but he says that in the concentration and quantity in which creolin is rationally used, it may be regarded as not poisonous. When the poisonousness of a medicine is spoken of it is to be understood relatively; for absolutely the most innocent substances may poison a man if taken in immoderate quantities. The harmlessness of creolin is particularly welcome in the treatment of children and in obstetrics. If an accident can at all happen, Jessner can imagine it possible only when a too strong concentration is introduced directly into the circulation. Well, that is a possibility that is so improbable that it need hardly be taken into consideration. It is certain, at any rate, that compared with carbolic acid and sublimate, creolin is a very safe drug. Further, creolin has not the slightest corrosive effect on either skin, mucous membrane, or instrument, even if used in a pure, undiluted form. Lately Jessner left in his overcoat pocket a large bottle of pure creolin, which in his absence his little children (aged from 1 to 3 years) pulled out, uncorked, and poured over the coat, dabbing their hands in it. Neither the children nor the coat suffered. What would have been the result had he still been in the habit of using carbolic acid as an antiseptic! [Creolin can be washed out of every material without leaving a spot, though it spoils after long application things made of India-rubber—*e.g.* elastic catheters.]

The skin becomes even soft and smooth after disinfecting with creolin, so that examination with the hand can be made without application of oil. The mucous membranes particularly are benefited by creolin. The vaginal mucous membrane, which is rendered hard, dry, and liable to bleed by carbolic acid and sublimate, becomes smooth, pliable, and slippery after being syringed with creolin. Diseased mucous membranes which secrete profusely are not only disinfected by creolin, but are often in a striking manner made to secrete less and to heal. The drug has also a beneficial effect on recent as well as purulent wounds, reducing the secretion, putting a stop to suppuration, and at the same time energetically helping the granulative formation. As Kortüm rightly puts it, it combines in a happy way the advantages of the energetically antiseptic effect of sublimate with those of iodoform. As to cost, the price of creolin is about one-fourth that of carbolic acid.

Other advantages are its deodorising properties, its styptic properties, and its destructive action on parasites. Another advantage it has over carbolic acid and sublimate, and that is that it is easily distinguished by its colour and smell.

Yet there are some drawbacks which, however, are of little weight compared with its advantages. The weightiest objection is the fact that the exact composition of creolin is not known. It is a mixture of many chemical combinations which it is difficult or impossible to analyse exactly. The drug is produced from creosote, and is composed according to different chemical analysis of 50 parts carbon hydrates, 30 parts phenol, 2 parts acids, 5 parts ashes, 5 parts water, and 8 parts other substances. The antiseptic action is most probably to be ascribed to the phenol, for of pure carbolic acid there is scarcely a trace. The drawback of this uncertainty as to the composition of creolin is that we are at the mercy of the makers, and that imitations have sprung up like mushrooms, each boldly pretending to be 'the original' creolin. The consequent puffing of the drug also disgusts the professional mind. But should the uncertainty as to its composition deter us from making use of a drug which is proved to possess extraordinarily favourable properties? Nor is creolin peculiar in wanting a clear chemical definition. For we use daily other medicines which are also mixtures of combinations, and cannot be exactly defined chemically. The composition of coal-tar and creosote is very uncertain. We find them, however, to answer certain purposes and stand certain tests, and recognise their right to a place in the Pharmacopœia. If that is enough for the practice with regard to the latter, let it suffice, too, for creolin. The best rule is to procure the drug always from the same maker. It is his interest to supply the drug in an unvarying form. Pearson's preparation is the most reliable, and German doctors cannot be accused of a want of patriotism if they cure their patients even with English creolin. Science has nothing to do with patriotism. The German preparations are not to be depended on. Latterly Pearson has brought out another preparation, *creolinum purissimum*, which is said to meet the objection that the emulsions of creolin keep badly, and leave resinous substances on the top, sides, and bottom of the vessels. This does not occur with the *creolinum purissimum*, and as soon as it is proved to be as good an antiseptic as the first creolin it will be generally adopted. By the way, it has 35 per centum more phenol parts.

Another disadvantage of creolin is its want of transparency, for it is inconvenient to fish about with your instrument in a muddy fluid. But that is a matter of secondary importance. It is not necessary to dip instruments that have already been disinfected in a stronger solution, but it suffices to cover them in a shallow saucer with a thin coating of a thinner solution. Just as unimportant is the objection to the smell of creolin, which is not worse than that of carbolic acid or iodoform. By the way, a 1 per centum admixture of creolin is a good deodoriser for iodoform. Until a completely harmless drug of exactly defined composition is found, possessing all the marked advantages of creolin, the latter will hold the field as an antiseptic.

JOHN ELLIOTT.

STATUE OF VAN HELMONT.—A statue of the great alchemist and physician Van Helmont was lately erected at Brussels, where he was born in 1577. The statue, which is in white marble, represents him with his chin resting on his left hand, and the right lying on an open book p'aced on his knees.

ARTICLE 1989.

LINDFORS ON THE TREATMENT OF CONGENITAL UMBILICAL HERNIA AT BIRTH.

AN article on this important subject appeared in the LONDON MEDICAL RECORDER of April 20, p. 130. Dr. Lindfors[*] has since collected 13 cases, recorded by different observers. Of these, 10 were operated upon, and 3 subjected to expectant treatment.

Case 1.—Felsenreich (*Wiener med. Presse*, 1883, p. 553). Large hernial sac extirpated seven hours after birth.[†] The sac contained intestines. Union of abdominal wound by first intention. *Case* 2.—Godlee (*Med. Times*, 1883). On second day after birth the patient came under treatment, but only expectant measures were adopted till fourteen days later, when peritonitis had set in. Radical operation, reduction of intestine difficult owing to adhesions with the cæcum. Death on the third day. *Case* 3.—Treves (*Lancet*, vol. i., 1881, p. 323, wrongly quoted by Dr. Lindfors as 1884). *See* LONDON MEDICAL RECORDER, April 1889, p. 130. *Case* 4.—Olshausen (*Archiv für Gynäk.*, vol. xxix., 1887; *Zur Therapie der Nabelschnurhernien*). Female child with macroglossia. A modified radical operation was performed three hours and a half after birth. The amnion was dissected off its line of attachment to the wide cleft in the abdominal wall, so as to avoid the peritoneum. The wound healed by granulation. *Case* 5.—Fleischmann (*Prager med. Wochensch.*, 1887). A large hernia, the walls appeared to be too far apart to allow of a plastic operation. The rupture was protected by a simple binder and the patient seems to have recovered. *Case* 6.—Caldwell (*Trans. Gyn. Soc. Chicago*, 1886). Herniotomy, escape of fæces through the wound on the sixth day. The fæcal fistula ultimately closed. *Case* 7.—Reuter (*Centralbl. für Gynäk*, 1887, No. 10). Threatened gangrene of the sac. Herniotomy; time after birth not stated; rapid recovery. *Case* 8.—Stypinsky (*Gaz. Lekarska*, vol. vi., p. 8). An enormous hernia, twelve inches in circumference. The heart and stomach could be seen and felt amongst the intestines in the sac. The defect in the walls was far too great for operation. Pressure was applied by means of a bandage. The patient died in the fourth week. *Case* 9.—Robertson (*Glasgow Med. Jour.*, vol. xxvii., 1887, p. 261). Hernia the size of a child's head; bandage; death on the ninth day. Abnormalities in intestinal canal discovered after death.[‡] *Case* 10.—Piperno (*Lo Sperimentale*, Dec. 1887). Radical operation, performed in a cold hovel; time after birth not stated; death on the second day. *Case* 11.—Dunlap (*Jour. of American Med. Assoc.*, Jan. 14, 1888, p. 50, and LONDON MEDICAL RECORDER, 1888, p. 50, and 1889, p. 130). Operation when child was one hour old; recovery. *Case* 12.—Dohrn—Eckerlein (*Zeitschr. für Geburtshilfe*, 1888, vol. xv., p. 2). Radical operation, extra-peritoneal as in Case 4, five hours after birth. As in Olshausen's case, the wound healed by granulation. *Case* 13.—Phenomenoff—Stolypinsky (*Dnevnik Kazanskahs Obshtchestva*

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[*] *Centralbl. für Gynäk.*, No. 28, 1889.

[†] In Dr. Lindfors' original paper in the *Centralblatt*, the age at operation is given as 'two days,' but the reporter has looked up the original reference. There are other errors in the paper, such as the omission of the (very tender) age of the infant at operation in Olshausen's case.

[‡] A portion of the jejunum was dilated so as to look like a second stomach and the ileum seemed to be continued direct into the rectum, the cæcum and colon being absent.

Vratchei, May 1888; LONDON MEDICAL RECORDER, April 1889, p. 130). Similar to Case 11, but chloroform was given. The operation was done when the child was an hour old; it succeeded perfectly.

These statistics prove that an infant bears abdominal section very well; indeed, cold is far more deadly than cutting, as was especially demonstrated in Case 10. Dunlap's case (11) shows that a new-born child bears an operation of this kind without chloroform, but Case 13 indicates that, on the other hand, an infant of the same age (one hour) bears chloroform. The patient may safely be put to the breast soon after the operation. Of the entire thirteen cases, ten underwent operation, with three deaths; three were simply bandaged, two of these cases dying. In respect to the 'expectant' cases, however, Case 8, it must be remembered had evidently an imperfect diaphragm; Case 9 had malformed intestine, and it is recorded that in Case 5 (which recovered), and Case 9, the size of the hernia and defect in the abdominal walls rendered an operation unadvisable. The opinion of those who recorded these 'expectant' cases may be trusted, since the contra-indications for operation were noted. The danger of compression was mentioned in the LONDON MEDICAL RECORDER last April, *loc. cit.* From the above statistics we may conclude that when a congenital umbilical hernia is discovered in a new-born infant, it is clear that the right treatment, except when the hernia is very large, and the deficiency of the parietes great, is to perform herniotomy as speedily as possible. ALBAN DORAN.

ARTICLE 1990.

SIELSKI ON THE RATIONALE OF THURE BRANDT'S METHOD OF TREATMENT OF UTERINE PROLAPSE. A MODIFICATION OF THE METHOD.[*]

DR. F. SIELSKI, house-physician to the Lecznica Lvovska, in Lvov, Austrian Galicia, severely criticises the mechanical treatment of uterine prolapse introduced by Mr. Thure Brandt, a major in the Swedish army (*vide* the LONDON MEDICAL RECORDER, Jan. 1889, p. 24), and suggests a novel, extremely simple, and seemingly effective method devised by himself. The latter consists in a daily reduction of prolapsed uterus by means of an instrument named an *elevator uteri* (*podnosiciel macicy*), and representing nothing more than an ordinary uterine sound bearing at a certain distance from its end (correspondingly to the length of the uterine cavity in the case given) a flat disc of the size of a kreuzer-piece. Having introduced the sound into the womb until the uterine os comes to rest on the disc, the author lifts up the uterus into the abdominal cavity as high as proves possible, without causing any painful sensation to the patient. Dr. Sielski says that he has cured by the method five out-patients in succession, the duration of the treatment in individual cases varying from two to four weeks. No relapse followed in any of the women. The explanation of such strikingly successful results seems to be almost as simple as the method itself. As is known, prolapsus of the womb is invariably associated with partial inversion of the upper part of the vaginal posterior wall, which becomes detached from the rectum; hence the Douglas pouch descends considerably lower than under normal conditions—that is, the stretched peritoneum comes to line out the rectovaginal gap formed by the detachment. At the same time *enterocele vaginalis posterior* necessarily arises—that is, several intestinal loops descend to lodge permanently in the said gap. Now, the ordinary methods of reduction of prolapsed womb seem to ignore the fact that a displaced organ can be completely reduced only under the condition that it is returned to its normal place along the same route which has been passed by the organ in the course of its displacement. Hence the reduction proves always incomplete, the enterocele remaining to interfere with the womb returning to its normal level. To effect a complete reduction, a reduction *en masse*, the uterus must be lifted up as high as possible, so that the recto-vaginal sac, with its contents, could be simultaneously reduced, and the detached rectal and vaginal walls return to their normal juxtaposition. That is exactly what Dr. Sielski's hyperelevation of the womb accomplishes. The same object is attained by Thure Brandt's *lyftingen* (lifting up the womb), which manipulation, according to Dr. Sielski, represents the essential or the only important part of the whole Swedish method, all other complicated manipulations being wholly superfluous.

V. IDELSON, M.D.

ARTICLE 1991.

LAUDER BRUNTON AND T. JESSOPP BOKENHAM ON THE COMPARATIVE ACTION OF HYDROXYLAMINE AND NITRITES UPON BLOOD-PRESSURE.[*]

THIS communication forms part of an ivestigation on which Dr. Lauder Brunton has been engaged for some years past, and in aid of which grants have been received from the Royal Society.[†]

In this investigation the action of various compound ammonias,[‡] and also of some nitrites,[§] and allied bodies,[||] has been examined.

The plan of research required hydroxylamine (NH_3O), forming as it does a link between these two classes of bodies, to be specially examined. The action of this body has recently become a subject of experiment by other workers,[¶] and it therefore seems advisable to publish now one remarkable relationship between it and nitrites, reserving for a later communication other results of this research. Two of the most striking effects of nitrites are: their power (*a*) to alter the colour of the blood,[**] and (*b*) to lower the pressure of blood within the vessels.[††]

Both of these properties are also possessed by nitroglycerine,[‡‡] and Hay has shown that the effect of this substance is due to the fact that it is decomposed in the blood with evolution of nitrous acid.[§§]

Hydroxylamine is a body in which two affinities of nitrogen are saturated by hydrogen instead of by oxygen as in nitrous acid. Its relation to nitrous acid will be seen by comparison with their graphic formulæ;—

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[*] *Wiadomosci Lekarskie*, No. 5, 1888, p. 137.

[*] From the *Proceedings of the Royal Society*, vol. xlv.

[†] May 1874, for investigation of the physiological action of ammonia, and others in 1877, 1884, and 1887.

[‡] Brunton and Cash, *Phil. Trans.*, 1884, p. 197.

[§] Brunton and Gresswell. Details not published. Vide *St. Bartholomew's Hospital Reports*, 1876, p. 143, and *Pharmaceutical Journal*, Dec. 22, 1888, pp. 491 and 495.

[||] Brunton and Tait, 'Physiological Action of Nitroglycerine,' *St. Bartholomew's Hospital Reports*, 1876, p. 140.

[¶] Binz, *Toxicologisches über das Hydroxylamin*, *Virchow's Archiv.*

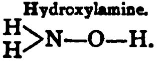
[**] A. Gamgee, *Phil Trans.*, 1868, pp. 589–626.

[††] Gamgee, quoted by Brunton, *Lancet*, 1867, July 27. Brunton, *Ludwig's Arbeiten*, 1869.

[‡‡] Brunton and Tait, *St. Bartholomew's Hospital Reports*, 1876, p. 144.

[§§] Hay, 'The Chemical Nature and Physiological Action of Nitroglycerine,' *Practitioner*, June 1883, vol. xxx., p. 429.

Hydroxylamine. Nitrous acid.



$$\begin{matrix}H\\H\end{matrix}\!\!>N—O—H. \qquad O>N—O—H.$$

It was shown by Raimondo and Bertoni[*] to have the power of producing a chocolate-brown colour of the blood, of lessening its oxidising power, and of producing a change in its spectrum, changes similar to those observed by Gamgee as consequences of the action of nitrites.[†] Loew[‡] found it to be a powerful protoplasmic poison. From a consideration of its chemical properties, Binz[§] was led to think that it must be reckoned amongst the bodies which cause paralysis of cells in the nerve-centres, either by setting free active oxygen or one of the halogens, and his experiments showed the correctness of his hypothesis. Raimondo and Bertoni thought that during the reaction between hydroxylamine and blood nitrous acid was formed, and Binz obtained the reaction of nitrites from the blood of animals poisoned by it.

It therefore seemed probable that it would affect the blood-pressure in a similar way to nitrites, and on testing it the authors found that it does. On injecting the hydrochlorate of hydroxylamine either into the veins or peritoneal cavity, it produces a fall of blood-pressure almost exactly similar to that produced by nitrite of amyl, as will be seen by a comparison of the accompanying curves, in which the fall of blood-pressure is so much alike that it is almost impossible to tell from a mere inspection of the tracings which is due to hydroxylamine and which to amyl nitrite. As hydroxylamine itself is very unstable, and is readily converted into ammonia, Dr. Brunton and Mr. Bokenham used the hydrochlorate, which they obtained from Messrs. Hopkin & Williams. As hydroxylamine is made commercially by the reduction of nitrites, it appeared possible that the specimen they employed might be contaminated by nitrites, and that its action upon the blood-pressure might be due to impurity and not to the action of the hydroxylamine itself. On testing the specimen they employed by starch-paste and iodine with acetic, sulphuric, or hydrochloric acid they got no reaction, and Messrs. Hopkin & Williams also told them that it gave no reaction with metaphenylene-diamine.

They therefore regard the specimen as pure, and attribute the fall of blood-pressure to the action of the hydroxylamine hydrochlorate, and not to any impurities contained in it.

Progress of Sanitation.—There are now thirty-nine crematories in various parts of the world. Italy leads easily with twenty-three, then comes America with ten, while England, Germany, France, Switzerland, Denmark, and Sweden are satisfied so far with one apiece. In Italy there were two cremations in 1876; the number rose to fifteen in 1877, and in 1888 the number was 226. Since 1876, 1,177 cremations have taken place in Italy, whilst the combined numbers from other countries bring the total only to 1,269.

GENITO-URINARY SURGERY.

RECENT PAPERS.

1992. Guyon.—The Pathological Physiology of Retention of Urine. (*Annales des Maladies des Organes Génito-urinaires*, June 1889.)

1993. Socin.—On Nephrectomy in a Case of Horse-shoe Kidney where one-half was Affected with Hydronephrosis. (*Beitrage sur klin. Chirurgie su Heidelberg, &c.*, Band ix., Heft 1.)

1994. Jamin.—On Incontinence of Urine in a Girl cured by Electrisation of the Urethra. (*Annales des Maladies Gén.-urinaires*, June 1889.)

1995. Lloyd, Jordan.—On Inflammatory Disease of the Seminal Vesicles. (*Brit. Med. Jour.*, April 20, 1889.)

1996. Thompson, Sir Henry.—On the Suprapubic Operation. (*Brit. Med. Jour.*, July 6, 1889.)

1997. Hill, Berkeley.—On some Affections of the Genito-urinary Organs. (Reported in *British Medical Journal.*)

1998. Guyon.—The Medicinal Treatment of Hæmaturia. (*Annales des Maladies des Organes Génito-Urinaires*, No. 1, 1889.)

Art. 1992. *Guyon on the Pathological Physiology of Retention of Urine.*—Professor Guyon makes use of a clinical case of retention for some general remarks on the pathological effects of retention, and the case is instructive from the fact that a relief of the retention by means of urethrotomy caused a cessation of the hæmaturia which had followed the retention. In experiments on animals different effects are produced according to the length of time the retention has lasted. In the first twenty-four hours scarcely anything but vesical lesions are found—distension of the bladder, congestion, followed by slight hæmorrhage into the mucous membrane; then larger hæmorrhages. The ureters appear normal, and are capable of contraction on stimulation. The kidneys are red and slightly increased in volume. After 48 hours of retention the scene changes; for we find the bladder in a high state of tension. Congestion is now attended with large ecchymoses and a network of arborescent vessels, and the urine contains red blood-globules; the ureters are dilated, marked on their surface with fine vessels gorged with blood, the contractility of the ureters to mechanical irritation is lost, and consequently the passage of urine along them is interfered with; the kidneys show intense congestion—the extent of this is seen when the dimensions of the kidneys are compared when examined at once or after death by hæmorrhage, as when the heart is opened. In the rabbit the results are:—*Before death:* Right kidney, 42 millimètres long, 33 millimètres broad; left kidney, 52 millimètres long. *After death by hæmorrhage:* right kidney, 38 millimètres long, 30 millimètres broad; left kidney, 37 millimètres long. The renal congestion may extend to hæmorrhage, and the parenchyma contain extravasations, and the urine of the ureters becomes bloody. Inquiring further as to the possibility of the blood having ascended by any mechanical means from the hæmorrhages into the bladder, he injected finely-powdered charcoal into the bladder in one of the animals under experiment, but could find no evidence of the charcoal in the ureters or kidneys. From these experiments he argues the necessity of early surgical interference in cases of retention. Taking the case in good time one has only to fight against lesions localised to the bladder. The ureters are not affected, though the kidneys are doubtless influenced by a reflex action, which is seen in the secretion of urine. But if a methodical and aseptic evacuation is provided a cure may rapidly follow, whereas delay may be fatal by the effects on ureters and kidneys, as well as on the bladder. Moreover, the chances of invasion by microbes is greatly increased (as shown in the paper noticed in the LONDON MEDICAL RECORDER, June 1889, p. 233).

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[*] Raimondi and Bertoni, *Annali Univ. di Med.*, vol. cclix., 1882, p. 97. Only known to us by abstract in Virchow and Hirsch's *Jahresber.* for 1882, 1, pp. 393 and 394.

[†] Gamgee, *Phil. Trans.*, 1868.

[‡] Loew, *Archiv f. d. ges. Physiol.*, 1885, vol. xxxv., p. 516.

[§] Binz, *op. cit.*

1993. *Socin on Nephrectomy in a Case of Horse-shoe Kidney where one-half was Affected with Hydronephrosis.*—In the *Annales des Maladies des Organes Génito-urinaires* for June, M. Vignard gives a translation of Professor Socin's (of Basle) paper, which seems of considerable importance. A woman of 47 years of age was admitted into hospital with symptoms of intermittent hydronephrosis of the right side, attended with severe colic and vomiting. But the diagnosis was not easily made out, for Professor Socin was not clear whether the tumour might not be connected with the mesentery or pancreas. However, the tumour was aspirated on April 26, and about 500 cubic centimètres of urinous fluid removed. A urinary fistula remained which transmitted purulent urine, while the bladder contained healthy urine. A further operation was therefore undertaken on May 12, 1888, at the patient's wish. The abdominal incision was made and the vascular pedicle of the right kidney ligatured, and there remained only to free the lower end of the kidney, when it was discovered that it was prolonged by a sort of bridge 4 centimètres wide across the vena cava and aorta to the opposite kidney, forming thus a horse-shoe kidney. Socin found that the isthmus was only slightly connected with the front of the vessels, and therefore divided it by means of the thermo-cautery. Five ligatures were found enough to stay all bleeding from the divided surface, and the capsule was ligatured as a flap, and the operation was completed by a lumbo-abdominal drainage. The progress was excellent. The urine was albuminous and bloody for a few days only. The patient went out well twenty-five days after the second operation. She was seen four months later in good health and with good colour, and able to work as she had not done for many years. Braun, of Heidelberg, reported a somewhat similar case, and in that the condition of horse-shoe kidney was only made out during operation for pyonephrosis. The adhesions between the isthmus and the vena cava were so close, however, that hæmorrhage occurred, and the patient died at the finish of the operation. Braun therefore came to the conclusion that the existence of a horse-shoe kidney was an absolute contra-indication to operation. Socin's case, however, shows this conclusion to be incorrect, and that the adhesion of the isthmus to the large vessels may not be insuperable. The difficulties of diagnosis are great. Manual examination by the rectum is often impracticable in those cases, and, if done, may not be of much assistance. The existence of a horse-shoe kidney, whether normal or diseased, cannot be diagnosed, but the number of such abnormalities is small.

1994. *Jamin on Incontinence of Urine in a Girl cured by Electrisation of the Urethra.*—The case here reported was of a girl, 15 years of age, who was under treatment for a considerable time, and in whom no cause could be found. No improvement took place on the establishment of the catamenia, and dosing by belladonna, nux vomica, &c., had no effect, nor yet the careful waking up of the patient once or twice a night. In despair of successful medication, Dr. Jamin practised the method recommended by Professor Guyon in the case of boys where the incontinence had become almost incurable, and used faradisation to the urethra. After the first few sittings, and using only a feeble current for about three minutes each time, decided improvement was noticeable. The application was on Dec. 9, 11, 13, and 15. On the 16th the girl wet her bed for the first time since the commencement of the treatment, but on the 17th the catamenia appeared. The applications were resumed on Dec. 22, 24, 26, 28, and 31, and Jan. 4, and there has been no incontinence, except once (Jan. 10), and the catamenia appeared next day. Inasmuch as she had had the incontinence since infancy, the benefit of the treatment was remarkable. As regards the technique of the operation, the author always introduced the negative pole into the urethra in the form of a small olive-shaped nickel body of the size of No. 16 French measure—enough to distend the canal slightly, and this was moved up and down the urethra while the positive electrode was placed on the thigh and not in the perineum, so as to avoid irritating the bladder.

1995. *Lloyd on Inflammatory Disease of the Seminal Vesicles.*—Mr. Jordan Lloyd calls attention to the importance of recognising inflammation of the vesiculæ seminales, and draws a parallel between this disease and that of inflammation of the Fallopian tubes in the female. Seminal vesiculitis is usually secondary to mischief in the urethra. It is a common accompaniment of gonorrhœal epididymitis, and originates in a precisely similar manner. When the inflammatory process has crept from the urethra along the common ejaculatory duct to its termination, it is as likely to proceed along the short seminal tube to the vesicle, as along the twenty-four inch vas deferens to the epididymis. He believes it commonly extends along both these structures. He has seen the vesicles inflame secondarily to urethritis, set up by the passage of a bougie, by the presence of a stricture, and after coitus with a leucorrhœal woman. He has seen both vesicles suppurate in one case where their inflammation appeared to be primary; at least there was no antecedent cause discoverable in the urethra. When acute inflammation attacks a vesicle it gives rise to a swelling at the side of the base of the bladder, the greater part of which is due rather to effusion of inflammatory products into the perivesicular connective tissue than into the cavity of the vesicle itself, just as we see that in epididymitis the bulk of the enlargement depends upon inflammatory infiltration into the connective tissue between the tubules of the epididymis. Seminal vesiculitis, like acute epididymitis, most frequently terminates in resolution. It sometimes ends, however, in suppuration, and, when this occurs, pus may make its way laterally into the ischio-rectal fossa, or may diffuse itself deeply around the rectum (constituting one of the varieties of peri-rectal suppuration), or may discharge itself by the ejaculatory duct, or may open either into the bladder or rectum, but never into both cavities together. Some cases of vesiculitis pursue a chronic course, and distend the cavity of the vesicle, a condition implying necessarily permanent choking of the ejaculatory duct, and giving rise to a cystic swelling behind and beneath the bladder. We are familiar with a similar state of things in connection with the gall-bladder, and in hydro- and pyo-salpinx. The symptoms of vesicular disease are essentially those of vesical irritability — increased frequency of micturition, attended by more or less pain. They are like those of prostatitis, according to Professor Humphry, and consist in uneasiness about the perineum, painful defæcation, frequent and rather painful micturition or retention, painful emissions at night, bloody semen, persistent gleety discharge, and irritability of the bladder and the sexual organs. Zeissl says that the subjective symptoms differ but little from those of prostatitis; but there is one symptom which belongs exclusively to this disorder, namely, erections are well-nigh constant, and so painful as to constitute priapism. According to Lallemand, Gosselin, and Pitha, involuntary seminal emissions occur. Objective symptoms are, in Mr. Lloyd's experience, much more reliable, and are easily elicited by careful methodical examination. A finger in the rectum recognises an elongated swelling beyond the prostate, running obliquely upwards and outwards at the side of the base of the bladder. This swelling is made quite evident to the examining finger when a metal bougie is passed into the bladder and moved from side to side across the tumour. He has demonstrated a distended vesicle in this way, and has verified the diagnosis by aspirating seminal fluid through the rectum. Gonorrhœal vesiculitis occurs at least in two forms, one mild, and the other severe. The mild cases are as common as gonorrhœal epididymitis, and are distinguished by symptoms usually attributed to the neck of the bladder or the prostate, such as deep-seated aching, and sensation of fulness in the perineum, irritability of the bladder with healthy urine, more or less relief to discomfort after micturition, absence of scalding and of urethral discharge, slight increase of troubles during defæcation. With symptoms such as these, a finger passed high up the rectum recognises heat, tenderness, and swelling at the base of the bladder, beyond the position of the prostate, and the diagnosis is in this way very easily made. These mild cases usually subside without any other treatment than that suggested by the gonorrhœa. The conclusions he is led to by his present experience are as follows:—1. That inflammatory disorders of the seminal vesicles and their ducts are not uncommon. 2. That they are in many respects analogous to inflammatory diseases of the Fallopian tubes in women. 3. That while occurring sometimes primarily, they are as a rule secondary to inflammation of the urethra. 4. That the ejaculatory ducts may become obstructed, and the seminal vesicles consequently hyper-distended. 5. That termination by suppuration is exceptional. 6. That when suppuration occurs it should be dealt with by incision from the perineum rather than from the rectum. 7. That gonorrhœa is by far their most common originator. 8. That they are frequently concomitant with gonorrhœal epididymitis. 9. That they are usually diagnosed as inflammation of the prostate or neck of the bladder. 10. That while certain subjective phenomena are suggestive of these disorders, their diagnosis can only be made by objective examination from the rectum and bladder. Since his attention has been particularly directed to this class of diseases, he has been struck by the frequency of their occurrence, and although his paper falls short of what he could have wished, and will not contribute much to our stock of knowledge, he ventures to hope that it may direct the attention of practitioners to a class of disorders which have hitherto received too little attention.

1996. *Thompson on the Suprapubic Operation.*—Dr. Herring gives notes of thirty-one cases of suprapubic cystotomy performed by Sir Henry Thompson, and the record will be of great value. These cases include two performed by the old method, as generally adopted before the modification suggested by Garson, and carried out so successfully by Petersen, of Kiel. This latter operation Sir Henry Thompson introduced here, and first performed in this country, being Case 1, second series. There are twenty-nine cases of the new operation; eleven of these were for tumour of the bladder, and eighteen for calculus, including one remarkable case * associated with calculus. The chief points attended to in this operation were, to commence with a fully, yet prudently-distended rectum, followed by a fair distension of the bladder; a sparing use of the knife, so that a ligature was very rarely necessary; the opening of the bladder by a small incision sufficient to admit the finger, but enabling further enlargement to be made by dilatation only, since after this the opening contracts, and stitching is not necessary, and moreover appears to be generally not advisable. *Two Cases of Suprapubic Operation by the Old Method.*—*Case* 1.—E. F., aged 13, January 1865. She stated she had passed a stout hairpin into the bladder; much pain followed; attempts in the country to remove it were unsuccessful. Under chloroform examined the bladder; the pin was embedded firmly, and no traction short of violence would remove it. The bladder was opened above the pubes upon a sound and the pin withdrawn. She made an excellent recovery in about a month's time, and was on the point of leaving, when she was suddenly attacked by severe pain and rigor, and died in two days. The autopsy showed that an abscess had formed in the track of the apparently healed wound, and had burst into the peritoneal cavity. *Case* 2.—Capt. H., aged 58, 1877. A large uric acid calculus removed. The patient had been the subject of complete paraplegia for years, and on this account could not be placed in the position for lateral lithotomy. All the urine had, during that period, been drawn by catheter. A difficult operation from the presence of a long false passage. He sank exhausted ten days afterwards. *The Series of Suprapubic Operations by the New Method* (*Cases of Tumour in the Bladder*).—*Case* 1.—Miss P., aged 73. Vesical bleeding about a year and a half, lately considerable, very frequent micturition, suffering extremely severe. Oct. 17, 1885. Digital exploration, by dilating the urethra, revealed a large papillomatous growth springing from the upper extremity of the vesical wall; hence the suprapubic operation was necessary, and a tumour about the size of an orange removed. Recovering slowly but steadily, the symptoms greatly improved. She died nine months afterwards. The operation had undoubtedly prolonged and rendered her life more easy. *Case* 2.—A. S., aged 55. Micturition frequent for four or five years, now every half-hour. Blood first seen one year and nine months ago, lately increasing. Patient very feeble. Nov. 16, 1885. The bladder evidently filled by the tumour, and the high operation was performed. A quantity of papillomatous growth removed, leaving a firm hard base. The patient returned home relieved at the end of a month, but died during the following year, recurrent masses (of round-celled sarcoma) having appeared in the situation of the wound. *Case* 3.—J. A., aged 45. Symptoms of four years' duration, consisting chiefly of blood in the urine and increased frequency of micturition. Oct. 8, 1886. Digital exploration revealed a soft growth, with wide base attached to the upper part of the bladder. Evidently was only to be dealt with through a suprapubic opening. The wound healed in a month. He was then able to hold his water four hours, which was passed free from blood, and without pain. It reappeared next year, and was similarly removed. *Case* 4.—H. T. B., aged 54. Long-standing symptoms of vesical tumour, lately severe, and recognised as a large growth. Dec. 8, 1886. A large pedunculated papillomatous tumour by high operation, and the whole removed. He made a rapid recovery. In November, 1887, he was in good health and actively employed, and there has been no sign of the reappearance of the growth. *Case* 5.—Capt. B., aged 61. In April 1885, a considerable papillomatous growth had been removed by a perineal opening with much relief. He returned February 1887, his symptoms having reappeared. Feb. 26, 1887. The high operation was performed and a large papilloma removed. His symptoms were somewhat relieved, but he never regained his strength, and he died the following June. *Case* 6.—A. W. P. K. Attacks of hæmaturia for many years. The bleeding had lately become continuous, and papilloma was suspected. The pain and frequent micturition were very severe. March 21, 1887. Digital exploration verified the diagnosis. The suprapubic operation was done in the usual way, and a fimbriated papilloma was removed, leaving a thick and hardened base. Much fever followed, from which he rallied, but gradually grew weaker, and ultimately died on April 1. *Case* 7.—Major B., aged 62. For eighteen months has been subject to hæmaturia, lately becoming severe. May 6, 1887. Removed by the suprapubic operation a small, wide-based, papillomatous tumour. Recovery delayed owing to the deposit of phosphates in the bladder. May 1889. During the last year and a half he has had frequent trouble from the same cause, but when these have been removed by a lithotrite he lives in tolerable health and comfort. *Case* 8.—G. L., aged 63. Last fifteen months marked symptoms of vesical tumour. July 7, 1887. Digital exploration, finding a broad-based tumour, and the high operation at once performed, removing as much as possible. He recovered slowly, and returned to the country relieved. Three months later he gradually sank from the extension of the growth, which proved to be epithelioma. *Case* 9.—E. I., aged 57. Had lost much blood during the last three months. Examination of the urine showed a fragment of papilloma. July 1887. Removed a broad-based growth, very like in form to that in the preceding case. The deposit of phosphates retarded his recovery, but eventually the wound healed soundly. He called the following October to say that he was free from symptoms, and following his very active business pursuits as usual. *Case* 10.—Col. B., aged 59. Three years ago first saw blood, which has been gradually increasing since. Considerable masses of round and spindle-celled tissue were found in the urine. April 11, 1888. The bladder was examined with the cystoscope, and a tumour seen on the posterior wall. May 7, 1889. The tumour was removed and a large mass separated close to its base. He left for Eastbourne five weeks afterwards, the wound not yet closed. June 28. The growth had evidently developed in the cicatrix, and ultimately in the original site, and he sank a month or two later. *Case* 11.—T. C., aged 50. Four years ago first saw blood in the urine. Now persistent and severe. Microscopic examination of the *débris* showed the presence of papilloma. June 22, 1888. An irregular tumour removed as close to the base as possible. July 18 he left town, the wound having healed and free from all symptoms. Heard, in the following November, that a mass of growth had appeared in the cicatrix of the suprapubic wound, and he subsequently died in the Liverpool Infirmary. *Calculous Cases.*—*Case* 12.—C. H., aged 36. Symptoms of stone for some time, with an abundant deposit of cystine in the urine. June 2, 1884. A cystine calculus weighing two ounces and three quarters was removed at the operation. He made a slow but sound recovery, and is now in excellent health. *Case* 13.—W. R. P., aged 12. The stone was evidently so large for a lad that there could be no question of adopting the high operation, which was performed on March 24, 1885. An oval stone weighing one and a half ounce was removed. He returned home quite well in a month. *Case* 14.—W. H., aged 62. Symptoms of calculus for fifteen years. The last seven years he had passed mostly in bed and on the sofa. A very large stone found on sounding. April 29, 1885. A calculus of pure uric acid weighing no less than fourteen ounces was extracted without difficulty. He made rather a slow but ultimately sound recovery. In the spring of 1889, he wrote that he was enjoying excellent health and leading a busy and active life. *Case* 15.—J. G., aged 73. Severe symptoms had existed more or less for five years. May 2, 1885. Lithotrity was attempted, but the stone being large and not easily grasped, the suprapubic operation was performed. The stone weighed rather more than one and a half ounce. A rather slow but sound recovery. In July 1887, he called to say that his health and strength are remarkably good for his age. *Case* 16.—J. B., aged 70. A large stone found on sounding. April 1885. The patient, who was very feeble, was submitted to the operation as a last resource; he never regained strength, and he died on August 13. *Case* 17.—J. B., aged 76. First seen in December 1870, and a small stone, the size of a nut, discovered. He refused operation. Aug. 9, 1885. Being fifteen years after the last visit, the calculus was now very large, and the suprapubic operation alone afforded him any chance of safe removal. This was done, and a uric acid stone, weighing six ounces and a half, removed. He made a good recovery without any troublous symptoms, and lived in comfort for a year or two afterwards. *Case* 18.—J. M., aged 50. With uric acid calculus. March 5, 1886. Removed a stone weighing two ounces and a half in the usual manner. He had completely recovered in a month, and was then in good health. *Case* 19.—E. H., aged 65. For many years had passed all his urine by catheter, with great frequency and pain, and had had two operations for stone. The prostate was of an enormous size, and to relieve the symptoms a suprapubic opening was made on April 29, 1886. The wound was fitted with a curved tube passing through a shield on the surface, and thus to an ordinary urinal attached to the leg. The patient was much relieved by the operation, and is still in good health, without pain. He continues to pass all his urine through the tube in the suprapubic opening (April 1889). *Case* 20.—E. G., aged 63. July 7, 1886. A rough stone, weighing one ounce and a half, composed of oxalate of lime, removed with ease. He returned home in the beginning of August well and free from all symptoms. *Case* 21.—J. J., aged 62. Oct. 15, 1886. A uric acid calculus, weighing one ounce and a quarter. The patient made a sound recovery. *Case* 22.—T. T., aged 68. For some years had been compelled to pass all his urine by catheter. Oct. 25, 1886. Crushing attempted, but the stone was found to be large and hard, and was therefore removed by the high operation. It weighed two ounces and three-quarters. At the end of a month he returned home perfectly well; continued so to present time. *Case* 23.—J. A. P., aged 59. May 13, 1887. An oval uric acid calculus, one ounce and a half in weight, removed as usual. He made a sound and rapid recovery. *Case* 24.—J. B., aged 67. A large stone found on sounding. Aug. 1, 1887. Removed. The patient made a rather slow but ultimately sound recovery. *Case* 25.—Col. A. A. B., aged 73. October 1887. The high operation was undertaken in this case, as the stone was not easily seized with the lithotrite. The patient was very stout, and the subject of an unusually large prostate. For the first few days after the operation he did well, and then gradually lost power, and died exhausted on the eleventh day. *Case* 26.—R. I., aged 36. May 5, 1888. Crushing attempted, but the stone was a large, rough oxalate of lime formation, and therefore the high operation was preferred. Thirty-six hours afterwards abdominal pain was complained of, and the tube was removed with relief. The urine then continued to flow freely by the wound, but vomiting and pain became severe, and he died on the fifth day. At the necropsy, signs of cellulitis were seen about the sides of the bladder under the peritoneum, and local peritonitis around these points. There was no perforation of the cavity. It is difficult to account for the condition; there had been no check or difficulty met with in the performance of the operation The stone, from its large size and spiked character, was an awkward one to remove, and may have damaged the soft parts. No other circumstance happened likely to have done so. *Case* 27.—D. W. G., aged 68. Oct. 5, 1888. Operated upon for an oxalate of lime calculus weighing 1 oz. The wound healed within a month, and the patient is now in good health. *Case* 28.—R. C. H., aged 51. Had been the subject of entero-vesical fistula for upwards of six years, and lately had developed marked symptoms of stone. Lithotrity was contra-indicated in consequence of the condition described. It was decided to perform the high operation. Oct. 13, 1888. This was done with difficulty, owing to the impossibility of distending the bladder with fluid. It was only with extreme care that the contracted bladder was safely opened on the point of a staff, and the calculus extracted. All went well in regard to the operation, but on Oct. 16 he had a severe attack of bronchitis and asthma, to which he had been subject for years. His asthma had long prevented sleep in a recumbent position, and an upright one in bed was necessary after the operation. He died exhausted on Oct. 24. *Case* 29.—C. R., aged 29. Had suffered for many years with symptoms of stone. He had been sounded frequently without result. Nov. 14, 1888. Examined under ether, and a large and very flat oval calculus detected. The following day the suprapubic operation was performed. The calculus was composed of uric acid, and weighed one ounce and a third. His convalescence was somewhat prolonged, but ultimately he returned home perfectly well. It will thus be seen that among the eleven cases of tumour only one was fatal, and that from pyæmia. Among the eighteen calculous cases there were three deaths, if the fatal result in case 28 is not included, in which death was clearly due to the severe attack of bronchitis and asthma, to which the patient had long been subject. The whole of these cases represent the most advanced and the most complicated examples of disease, and were on that account not amenable to lithotrity, or to a perineal section of any kind.

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* *Clin. Soc. Trans.*, vol. xxi., p. 46.

1997. *Hill on some Affections of the Genito-Urinary Organs.*—Three lectures were delivered at the Royal College of Surgeons recently, and the following abstract contains the main points referred to:—

LECTURE I.—DIMENSIONS OF THE NORMAL URETHRA.—Tested by the meter and examined by the endoscope, the natural condition of the urethra when at rest is that of a tube with its elastic walls closely contracted, capable of yielding to the flow of urine and the passage of a sound much larger than any stream of urine. This expansibility varies in different parts of the canal, being greatest in the prostatic portion. There it reaches to 50 or 60 millimètres in circumference. At the aperture in the triangular ligament, it ranges from about 40 to about 25 millimètres, most commonly it is about 30 millimètres. At the bulb expansibility of the urethra again is sometimes 40 millimètres, when the rest of the penile portion is only 30 millimètres. The meatus varies greatly, 25 millimètres being the common size. When seen through the endoscope, the colour of the mucous membrane is pink, or bluish-pink, varying in different individuals, but identical with the hue of the buccal mucous membrane. The surface has a fine gloss or brilliancy given to it by a thin lubricating layer of mucus. Along the floor two fine furrows course forwards, and towards the deeper part minute carmine-tinted papillæ are visible. The openings of ducts can be seen in health in the prostatic portion, but seldom or never in the part anterior to the triangular ligament. The lumen is generally linear when closed, and in the penile part transverse, except at the fossa navicularis, where it is vertical and lozenge-shaped. At the membrano-prostatic portion the lumen is saddle-shaped or arched.

MORBID CHANGES IN URETHRITIS.—*Varieties of Urethritis.*—Inflammation may invade the tissues in several ways; first, simple mucous catarrh; next, inflammation of the whole substance of the mucous membrane and submucous tissue, and even the erectile tissue; lastly, the glands of Littrè and lacunæ of Morgagni are chiefly affected. Near the meatus long ducts open, which occasionally become inflamed, and are very slow to heal. These ducts are most easily seen in persons who have slight hypospadias, as small dots from which muco-pus comes by slight squeezing, and through which a probe can be passed for half an inch. Further down the canal the inflammation may extend along the ducts into the glands of Cowper; and further still, by the ducts into the body of the prostate. Besides these simple catarrhal extensions there are other affections which may be classified as:—1. Superficial granular induration of the mucous membrane. 2. Inflammation of the glands and lacunæ. 3. Areas of deeper induration with proliferation of cells, ultimately converting the mucous tissue into fibrous tissue. 4. Patches of fibrous tissue penetrating into the submucous and erectile tissue. *Coincidence of these Varieties.*—The readiness with which these forms relapse makes it not uncommon to have them present together in the same urethra. In general inflammation of the mucous membrane itself the membrane is bright red, with an absence of mucus, and is so swollen that the lumen becomes circular or oval. Later on the general red congestion changes to isolated dark red patches, around which the natural colour reappears in the mucous membrane. Further, chronic inflammation goes on in the parts still left congested. *Erosions and Granulations.*—The loss of epithelium from small areas forms shallow erosions, from which in some cases spring up granulations, which appear as uneven red areas, often dotted with grey adherent pus. The rows of granulations stretch obliquely or transversely along the urethra, leaving ultimately a palish grey streak of fibrous tissue, or which may rise into thin fibrous ridges, and thus forming the so-called bridle strictures. These terminations are usually permanent: in some patients they may disappear, and their sites become indistinguishable; especially may the erosions disappear altogether, and leave the tissue elastic as before. After the catarrh dies the mucous membrane is often left paler than before, or with patches of brown pigmentation. Over the generally pallid surfaces large blood-vessels may be seen. *Glandular Changes.*—In the changes of the glands and lacunæ the glands first appear as little red dots. Around these red dots, owing to the shrinkage of submucous infiltration, little white circular areas develop. The ducts sometimes, owing to wasting of their walls, give cup-like greyish-brown depressions with yellow pus lying in their floor. Gradually the redness disappears from these dots, and they become indistinguishable from the red areas in which they have been placed. *Deep-seated Inflammation.*—The deep infiltration of the mucous membrane and underlying erectile tissue causes changes of more serious character, among which is the conversion of the parts affected into ordinary scar tissue without ulceration. The changes may reach considerable development before the superficial congestion and bright colour of the patch undergo diminution. The redness then subsides to a purple and greyish lilac hue, slowly becoming grey or yellowish-grey. The surface of these grey patches is often rough, and the lustre small, owing to the imperfect epithelium which covers them. A leading characteristic of these deeply-spreading inflammations is their abrupt limitation. The superficial indurations shade gradually away into the surrounding non-inflamed mucous membrane; the deep ones, on the contrary, are quite isolated nodules. Their presence is indicated as the inspecting tube passes them by the way in which the lumen wriggles from side to side through their want of contractility. After some months' duration, the surface of the scleroses becomes irregular or ridged. The lumen, instead of being transverse or linear, is pushed into various positions, arched, sinuous, or guttered. Probably these deep nodules of sclerosis are not absorbed; the superficial ones doubtless are frequently cleared away, but the deeply spreading ones remain to form fibrous stricture of the urethra. *Symptoms of Chronic Urethritis.*—The symptoms of chronic urethritis were dwelt upon, being little more than a drop of milky white muco-pus occasionally seen at the meatus, or as shreds and flakes in the urine. This in most cases was due to patches of granulations at the bulbous or membrano-prostatic portions of the urethra. These were shown to be the source of the frequent recurrence of scalding and free discharge during the course of chronic urethritis, if the patient departed from his *régime* or discontinued the use of his injections. The uncertainty of the length of time during which contagious power continued in a discharge was remarked upon, and it was acknowledged to be impossible to lay down a hard-and-fast rule as to the time when liability to communicate disease was lost. It was suggested that the discharge produced by a few granular patches on the surface of the urethra would no longer provide a contagious discharge; but so long as discharge came from crypts and ducts of glands there was probability that it contained the power of communicating gonorrhœa. *Narrow Meatus.*—Narrowness of the meatus was shown to be a common cause of the maintenance or prolongation of discharge, and, moreover, that symptoms of much greater importance might be produced by this abnormal condition of the outlet, such as difficulty in micturition—spasm at the deeper part of the urethra during the passage of a sound so great as to suggest the presence of real stricture. The localities where granular patches and indurated areas were most commonly met with were pointed out, being the bulbous portion, and about three inches from the meatus. *The Relation of Glandular Changes to Gleet.*—The occurrence of inflammation in the glands and closed ducts, causing small abscesses and fistula as a source of gleet, was explained. The occasional extension of the inflammation to Cowper's glands was indicated by circumscribed perineal swelling away from the mesial line and near the crus penis by the sudden disappearance of the swelling and the inconvenience caused by it, with simultaneous abundant discharge of pus during an act of micturition. The occasional formation of large abscess or perineal fistula, instead of evacuation of the Cowperitic abscess, along the duct of the gland was mentioned. The frequency of acute prostatitis, of acute epididymitis, occurring at any period of the existence of a chronic urethritis, was also mentioned.

LECTURE II.—TREATMENT OF CHRONIC URETHRITIS.—*Analysis of* 110 *Cases.*—The different methods of treatment were compared, and the effects of these demonstrated by means of an analysis of cases prepared for the purpose. In 110 cases this analysis showed that one at least of the four following conditions were present:—(*a*) Abnormally small meatus; (*b*) stricture; single or multiple, slight or tight; (*c*) patches of inflammation; (*d*) granular areas. Though other conditions might be present with production of strictures, in the great majority of cases stricture was present. In thirty-five of the 110 cases there was but one stricture; and in seventy-five more than one. The strictures were most numerous between the third and fourth inch from the meatus, next to that in the first inch and a half. Stricture is not indispensable for the maintenance of the chronic discharge. In a patient who had had discharge for twenty-five months, No. 27 millimetric bougie passed easily on the first examination. On the other hand, patients whose affections have relapsed for a few weeks or months, have not infrequently unyielding areas, which form two strictures. The average duration of the treatment in ninety cases was 2½ months, but this includes treatment in many different ways.

Soluble Bougies.—Among the remedies used were soluble bougies containing various drugs in amalgamation: fifty patients had been treated with this remedy, the average number being twelve per patient, although in one case forty-eight bougies were employed. In ten a cure was effected, two were treated by rhatany; one by sulphate of zinc and belladonna; four by chloride of zinc and belladonna; and three by chloride of zinc alone. *Thallin.*—Thallin, as prepared in Christy's bougies, was tried in nine cases, with the following result:—None were cured, four were made worse, one was slightly benefited, and four were not improved. *Iodoform.*—Iodoform bougies were not used in any cases, as they are useless in chronic urethritis, and of little service in acute urethritis. *Permanganate of Zinc.*—Permanganate of zinc has been used by the lecturer for several years; it was first recommended to him by Dr. Alder Smith, of Christ's Hospital; he prescribes it in all cases of urethritis, most frequently in the acute form. Notes of its use were taken in seventy cases. Ten were cured by it; in fifty-four it very greatly diminished the discharge; in four it did no good, and in two it made the discharge worse. Its use was particularly marked by the absence of any irritation. It should not be used in strong solution, one grain in eight ounces of distilled water, and should not be prescribed in conjunction with vegetable extracts, as an almost explosive mixture is thereby produced. *Sulphates.*—The sulphates of zinc, alumina, copper, and iron are most efficacious in the later stages of the gleet. They appear to be easily absorbed, and penetrate deeply into the inflamed tissue. The alumina and zinc salts appear to combine with the discharge without penetrating deeply in the mucous tissue. Sulphate of copper, on the other hand, penetrates deeper, and must not be used in a strong solution, as it causes slough, which leaves a scar behind it. These notes were taken by observations through the endoscope. Sulphate of iron is of no great value, but usefully affects the three preceding drugs. Twenty-five cases were treated with the four sulphates; in eight it was the third remedy employed, with four cures and four improvements. Used as the first remedy it cured twice and improved twice. The rest of the twenty-five it either cured or improved, with one exception. In that no improvement was marked. The strength of the solution as commonly used is:—Sulphate of zinc, 30 to 40 grains; alum, 30 to 40 grains; sulphate of iron, 20 grains; sulphate of copper, 2 grains; water, 8 ounces. *Nitrates.*—In using solution of nitrate of silver, small instillations are made on the points of disease previously ascertained. The strength of the solution is from 5 to 25 grains—5 to 10 minims is the quantity injected. The irritation caused by this injection is unimportant. The effect passes off in a day or two, and must be repeated every third or fourth day until the granular patches no longer exist. Where induration of the submucous tissue exists as well as granular patches, these unyielding parts are stretched in the passing of the bougie before the instillation of the nitrate of silver. The nitrate of bismuth has but a restricted value as an astringent. In some cases it does good, in others none. *Chloride of Zinc.*—For the value of chloride of zinc as an injection, forty-three cases were analysed. In seventeen of the forty-three discharge ceased after its use, in nine others it diminished. *Belladonna, Opium, Cocaine.*—Extract of belladonna and extract of opium, long used by the lecturer as sedatives, appear to have but small influence in that direction. Cocaine in 5 per cent. solution, applied before the injection is thrown in, is a very efficient anæsthetic when much pain is caused by the injection. Parenthetically it was remarked that during the acute stages of gonorrhœa, when scalding is severe, the injection of 10 per cent. solution of cocaine into the urethra entirely prevents the scalding pain of micturition. *Treatment of Granular Patches.*—After a few remarks on the injurious effects of certain articles of diet, the lecturer described his method of treating the granular patches—being, first, to pass bougies in order to dilate the contracted areas, and observations on the effect of bougies have shown this to be always the same, viz., not to stretch but to split. The splits pass through the fibrous areas and do not affect the naturally elastic membrane. The endoscopic tube is then passed down through the split part and a mop soaked in nitrate of silver solution was applied to the patches and to the split areas as the tube was withdrawn, the granular condition of the membrane or prostatic part being also treated at the same sitting by the instillation of a few drops of nitrate of silver through a catheter fitted for the purpose. The appearance of strictures split by the passing of bougies in the ordinary process of dilatation, and some of the chronic strictures was demonstrated by drawings and diagrams; also others divided by internal urethrotomy were shown in comparison.

Some Affections of the Prostate consequent on Chronic Urethritis.—*Prostatic Catarrh.*—This is a very common accompaniment to chronic inflammation of the penile portion of the urethra. The liability was mentioned of urethritis to arise in gouty people on small provocation, such as excessive acidity of the urine. Such affections are increased by specifics against gonorrhœa and usually assuaged by alkalies and colchicum. The irritation caused by excessive excretion of phosphates in the urine was alluded to. The symptoms of the prostatic catarrh, and of the methods of diagnosing it were then described, one chief symptom being the sense of heat produced by the passage of a sound over the membrano-prostatic urethra. The changes of the surface as seen through the endoscope were described to be granular thickening, enlargement of the papillæ of the surface and erosions. Infiltration and condensation changes in the membrane of that part of the urethra do not take place. The prostate becomes in catarrh regularly marked with slight elevations, and depressions of purple or crimson hue. In the depressions are placed little flecks of viscid matter. The shape of the prostatic portion varies considerably. When much congested, the surface rises into a rounded form. When congestion ceases, the surface sinks till nearly flat. With mere prostatic catarrh the examination with the finger in the rectum does not usually detect any change of health. The treatment consists mainly of local applications and in a *régime* from which excitement and excessive exercise are excluded. The local treatment is repeated, injections of small quantities of astringent solutions of nitrate of silver as already mentioned. Occasionally the specifics, cubebs and buchu, sandlewood, copaiba, &c., are useful.

LECTURE III.—PROSTATITIS.—*Symptoms.*—In inflammation of the substance of the prostate besides the symptoms of granular prostatitis, there are aching or stabbing pains in the anus, sacrum, or perineum; pain at the suprapubic region is a common sign. There are also radiating lumbar or femoral pains after exercise or long journeys, general languor, *malaise*, or depressed spirits. Increased frequency of micturition is often absent; when present, it is felt by day, not by night. The flow of urine is altered by delay at the beginning, which may amount to retention. Dull pain after micturition, sometimes spasm at the end of the flow, with a sense of more to come are complained of. In cases of long standing, micturition during sleep is a symptom—constipation is almost invariable. When the congestion is great there is pain during defæcation, and between the acts a sense of weight at the anus or in the perineum. Pain in the testes when it occurs is simply a neuralgia. There is constantly hypersecretion of mucus. In some patients the organ recovers its natural condition in a few weeks; but usually the disease drags on a course more or less wearisome; thus the termination is very uncertain. Relapses are almost sure to follow if the patient exceed in his diet or *régime.* In relapses small abscesses often collect in obstructed ducts, which usually empty themselves through a duct before accumulating much. Sometimes the inflammation spreads to the parenchyma, and the prostate then becomes unyielding to the touch, hard, and sensitive. The enlargement of the organ may last long. The increase in size may be symmetrical, or only affect one part, giving the sensation of irregularity or lobular form when felt by the finger. In course of time, the nodules may disappear, and the organ regain its natural size, or even shrink below it, and feel quite firm and smooth. *Treatment of Chronic Prostatitis: General.*—The treatment of chronic prostatitis is very tedious. Of the many remedies in use but few are trustworthy. General treatment only assists local remedies. In the first place, the dyspepsia must be cured. The tonics most beneficial are iron in non-astringent forms; nux vomica or strychnine are usefully added to the iron. Belladonna also may be added to the tonics if micturition during sleep be a symptom. Ergotine is especially useful when the organ is large, and aching is caused by walking, or standing, or railway journeys. *Local Treatment.*—When the organ is enlarged, soft, and not tender, a very good remedy is the cold sitz bath, taken at first for one or two minutes, once or twice daily, at a temperature of 50° F., gradually prolonged to ten minutes, and lowered to 35°. The cold douche on the perineum or anus is also useful. Cold enemata are more generally beneficial than baths, two to four ounces of cold water thrown into the rectum daily, and retained there; beginning at 45° F., and gradually lowered to 35°. Among recognised remedies is blistering the perineum, but the lecturer has no faith in its efficacy. Caustic injections are valuable if used after other means. The solution of 20 to 30 grains of nitrate of silver to the ounce, and 10 minims injected at a time, is a good preparation. This has to be repeated several times. *Prostatitis from Masturbation or Excessive Venery.*—Masturbation is a frequent provocative of prostatitis, sometimes in the acute form, more often in the subacute or chronic forms. In the mildest form of prostatitis through masturbation, the prostate bleeds easily, the urine is often tinged with blood, smoky, or even coffee-coloured. If felt per rectum, the organ is found little changed from the natural condition. General *malaise*, inappetency, and slight elevation of temperature usually accompany the bleeding. Bleeding from the congested prostate may be copious in young men when it follows prolonged venereal excitement and excessive copulation. Commonly very copious when thus originated, it may be profuse for an hour or two, and exhausting. *Treatment.*—In these affections the liquid extract of salix nigra, a drachm three times daily, has often a marked effect in checking involuntary emissions, and thereby preventing the irritation and exhaustion and neuralgia which some persons feel after these attacks. *Sequelæ of Prostatitis.*—Persons who have suffered from a congested prostate are liable to too speedy ejaculation during copulation. This may be so rapid, and erection so fugitive, that effective coitus is impossible. For such cases the liquid extract of damiana has sometimes a powerful effect. But cure is almost hopeless if continence is neglected. Some persons give way to the sexual appetite without limit. Then follows a condition of great helplessness. The intense neuralgia of the lower extremities which follows the shortest walk renders exercise impossible. Pain is rarely absent, even when at rest; it extends from the sacrum along the spinal column to the occiput. The digestion is deteriorated. Topical treatment, after the mucous catarrh and chronic inflammation of the prostate is quelled, must be laid aside. The best remedy is a life of quiet, absence of exertion of any kind; a long sea-voyage is one of the best remedies. In rare cases chronic parenchymatous prostatitis excites temporary mania, which has erotic irritation for an early or leading symptom. It disappears if the patient recovers from the physical affection.

TUBERCULOUS DISEASE OF THE PROSTATE.—*Etiology.*—This frequently follows gonorrhœa. In the early stages the symptoms, being those of catarrh, escape notice, and the tubercle in the prostate cannot be detected by the finger until it has become considerably developed. *Early Symptoms.*—This catarrhal condition of the prostate, with slight irritation of the bladder, lasts an indefinite time; eventually attention is directed to the prostate by the occurrence of other symptoms, such as frequent seminal emissions or by weight in the perineum and pain in the sacrum. In other cases, the patient notices increased frequency of call to micturate, but a slowness in starting the stream of urine; then he feels a burning or cutting pain during the flow. *Later Symptoms.*—As soon as the shape and consistence of the prostate are altered, the finger in the rectum finds the prostate irregular, perhaps larger than natural, tender, particularly at the posterior part near the trigone. The disposition of these irregular thickenings is variable. When cystitis is developed, copious viscid pus mixed with shreds and blood-clot form the urinary sediment, and the urine contains albumen in considerable quantity. The further progress of the case is accompanied by gradual participation of the ureters and kidneys in the septic inflammation, and the patient is gradually exhausted. Acute general tuberculosis may terminate his sufferings. *Age.*—The ages of the patients usually range from 19 to 40 years. *Use of the Cystoscope.*—The lecturer had inspected two cases of advanced disease by the cystoscope, and the surface was irregular, with pits at the uvula vesicæ or neighbouring part of the floor of the bladder, partly filled with shreds of tissue, muco-pus, and blood-clot, though in those cases cystitis, ulceration, burrowing abscess in the floor and walls of the bladder are usually superadded before death. *Differential Diagnosis of Tubercle in the Prostate.*—In early cases the presence of tubercle elsewhere may be wanting, as the prostate is often affected before other organs. The disease most commonly suspected when tubercle is irritating the prostate is stone in the bladder. The urine is at first only moderately turbid in both. In prostatic tubercle there is often a gleet, or history of such having continued since an attack of gonorrhœa; a little shreddy mucus may be washed out with the first portion of urine voided, the remainder being only slightly turbid. In stone, on the other hand, a drop of blood often comes at the end of the stream instead of pus at the beginning. When blood comes from the prostate it is usually washed out first as coagula mixed with curdy pus. If the patient be sounded and stone be there, it can be generally detected. Sounding does not always discover any alteration in the shape of the prostate or trigone unless the tuberculous disease be far advanced. The distinctions of vesical tumour from prostatic tubercle are so great that confusion is not likely to occur. Tuberculous pyelo-nephritis creates symptoms which often suggest disease of the neck of the bladder. In these cases the absence of change in the condition of the prostate and the presence of tenderness in the renal regions indicate the real seat of disease. *Treatment of Tuberculous Prostatitis.*—In the early stages the catarrh must be cured, and the general treatment for tubercle applied. In the later stages the ragged cavities must be carefully washed out. A good antiseptic solution is two grains to the ounce of sulphate of quinine, two ounces being injected and left in the bladder after the pus and urine are well cleared out by repeated small injections of boric acid solution. Still more antiseptic is an emulsion of iodoform. In cases of chronic cystitis, if the bladder is well washed, and a couple of drachms of this emulsion injected, the most fœtid ammoniacal urine is replaced by acid urine, fœtor disappears, and the pus rapidly diminishes. In cases of cystitis caused by neglect of prostatic retention, the urine in ten days becomes quite free from deposit, and even when calculus or tumour or malignant ulceration co-exist, the improvement is enormous. The lecturer exhibited two diagrams copied from drawings made of the floor of the bladder viewed by the cystoscope, which showed an early tuberculous ulcer of the mucous membrane before and after healing. This was cured by washing out the bladder with an injection of iodoform emulsion, so that in a fortnight the patient, a man with advancing pulmonary tubercle, was cured of his bladder trouble. When the pain of washing the bladder is severe, cocaine previously injected often renders the operation bearable. When things are too far gone for this, ether should be given while the bladder is thoroughly washed with a large silver catheter and Clover's extracting bottle, then a drachm of iodoform emulsion is injected and left in. Subsequent washings may then be carried out with very little suffering. The formula for the emulsion is—iodoform, 2 parts; mucilage, 4 parts; glycerine, 2 parts; water, 20 parts. *Perineal Section.*—In former years the lecturer had found it necessary to do perineal section in order to obtain constant drainage when the urine could not be restored to a healthy state by other means. But the use of iodoform emulsion may prevent this necessity when perineal drainage is carried out. The daily washing is still as needful as when the urine is voided by the urethra. The effect of this thorough drainage is so great that patients feel strong and well while it is continued, and a permanent cure by this method may be attainable. W. W. Wagstaffe.

1998. *Guyon on the Medicinal Treatment of Hæmaturia.*—In a lecture on the treatment of hæmaturia, delivered at the Hôpital Necker, and published in the *Annales des Maladies des Organes Génito-Urinaires*, No. 1, 1889, Professor Guyon stated that he had long ceased to believe in the hæmostatic virtues of the medicinal agents so frequently given in cases of bleeding from the urinary tract. Not one of these agents, it is stated, has maintained its reputation in Guyon's practice. Ergot has been administered in different forms by the stomach, the skin, and the rectum, but invariably without any success. What this agent does for the uterus it fails to do for the bladder. Resinous agents and the derivative preparations alone have any efficacy, which, however, is held to be preventive rather than curative. These conclusions, which Guyon states are based on the results of very careful observation, are applicable to renal as well as to vesical hæmaturia. This distrust of the value of any internal agent in arresting or moderating the loss of blood has led Guyon to rely on remedies that favour, and to abandon those that interfere with, the compensation of this loss. Amongst the latter class of remedial agents are to be included those that diminish the appetite or disturb digestion. Therefore, notwithstanding his appreciation of the efficacy of the terebinthine preparations, Guyon does not prescribe or continue their use except when they are readily and thoroughly tolerated. Of the agents that help to make good the loss of blood, the best, it is held, are tannin and cinchona. These, when administered together, are usually well tolerated and improve the appetite. Perchloride of iron, which is so frequently resorted to as an anti-hæmorrhagic agent, is regarded by Guyon as a fairly useful remedy, but simply on account of its being a good ferruginous preparation. Guyon holds that the principle of the medicinal treatment of hæmaturia is to distrust every supposed hæmostatic agent, but at the same time to administer internal remedies, with the object of restoring the elements of the blood. W. Johnson Smith.

New Diseases.—There is a home for soldiers' orphans at McAllisterville, Pa. The inmates are boys from 10 to 16 years of age. Recently an epidemic 'disease,' characterised by inability to pronounce certain words or the substitution of incorrect words in their speech, broke out among them. It was diagnosticated as hysterical in character, and it was assumed that something was wrong with the diet or surroundings of the boys. They have now confessed that it was entirely put on for fun, and the doctors who discoursed of heterophemy, &c., are now smiled at. The *Boston Medical and Surgical Journal*, whence this extract is taken, slily remarks that the treatment proper for the affection would seem to be a spanking all around.

THERAPEUTICS.

RECENT PAPERS.

1999. COGLITORE, V.—On Cinchonism and Means of Preventing it. (*Riv. Clinica*, May 1889.)

2000. ATKINSON.—On Quinine in Pulmonary Inflammations. (*Practitioner*, June 1889, p. 434.)

2001. PHILIPS, DR. ALEXANDR Ï.—Hydrate of Chloral as a Hæmostatic. (*Novostï Terapiï*, No. 10, 1889, p. 155.)

2002. MIKHAILOFF, DR. S.—Case of Diarrhœa of Thirty Years' Standing Rapidly Cured by Salicylate of Bismuth. (*Meditz.*, No. 2, 1889, p. 1.)

2003. OSSOVSKY, DR. NIKOLAI P. — Creolin in Dysentery. (*Vratch*, No. 14, 1889, p. 329.)

2004. MITROPOLSKY, DR. ÏVAN A.—The Treatment of Sea-Sickness. (*Novostï Terapiï*, No. 13, 1889, p. 203.)

2005. LIEGEOIS, DR.—On the Therapeutical Applications of Veratrum Viride. (*Rev. Gén. de Clin. et de Thérap.*, June 6, 1889.)

2006. HAMMERSCHLAG.—Formula against Migraine.

2007. IMOSSI, DR.—On Iodine in the Treatment of Warts. (*Bull. Gén. de Thérap.*, June 15, 1889.)

2008. BOUCHUT, DR.—On Relief of Chronic Coryza. (*Rev. de Thérap.*, June 1889.)

2009. BUCQUOY, DR. — Anti-dyspeptic Mixture. (*Rev. de Thérap.*, June 1889.)

2010. CALVELLI, DR.—On Erysipelas.

2011. POULET, DR.—On Bronchial Asthma.

ART. 1999. *Coglitore on Cinchonism and Means of Preventing it.*—Dr. Coglitore, after enumerating the principal symptoms of poisoning by quinine, says that in cases of toxæmia no good is obtained from the various remedies employed as substitutes for quinine (arsenic, salicin, eucalyptus, &c.). He finds that quinine is always well borne if given with ergotin and opium. This is his formula:—℞ Quiniæ sulphat., 75 centigrammes; Bonjean's ergotin, 30 centigrammes; opium, 5 centigrammes. Make three powders, to be given at intervals of one hour. Given in this manner, quinine succeeds in the gravest cases, and gives rise to no symptoms of cinchonism. G. D'ARCY ADAMS, M.D.

2000. *Atkinson on Quinine in Pulmonary Inflammations.* — In the *Practitioner*, June 1889, p. 434, Dr. Atkinson directs attention to the use of quinine in such affections as pneumonia, bronchopneumonia, pleurisy, and whooping-cough. In the case of adults the author advises about three grains to be given every three or four hours, either immediately before or after food. In cases of pneumonia, if there be much headache in the early stages, it is good to combine three or four minims of tincture of digitalis with each dose; if the skin be hot and dry, a little effervescing citrate of potash, combined with some sweet spirits of nitre, should be given alternately with the quinine until diaphoresis occurs. In whooping-cough quinine perhaps acts antiseptically on the germs, which have their habitat in the upper part of the pharynx. The author believes it shortens the duration of pneumonia, and in young children many cases that a few years ago would have been looked upon as hopeless now make a good and rapid recovery. Cases of whooping-cough treated with quinine make a more rapid recovery, and have less violent spasms than those treated with bromides and belladonna, and where there is much secretion or an apparent want of nerve-power the combination of quinine with the syrup of the lacto-phosphate of lime proves of great service. Dr. Atkinson urges the more extended use of quinine in these diseases, and is sure that if given a good trial no one can be dissatisfied with the results obtained. RICHARD NEALE, M.D.

2001. *Philips on Hydrate of Chloral as a Hæmostatic.*—Dr. Alexandr I. Philips, of Kharkov, draws attention to the fact (*Novostī Terapīī*, No. 10, 1889, p. 155), that hydrate of chloral affords a powerful means for controlling hæmorrhage from internal organs. He uses the following solution: ℞ Hydrat. chloral., ʒj.; aq. destill. ℥vj. S.D. Three spoonfuls (*sic*) a day. Three illustrative cases are adduced, one of which refers to uterine fibromyomata with frequent, exceedingly profuse, and exhausting floodings, resisting hydrastis canadensis. After three doses of the solution, "the hæmorrhage decreased to a minimum amount' and finally ceased altogether on the following day. In another patient suffering from profuse hæmorrhoidal bleeding, it was arrested by the administration of six spoonfuls, while in a third case concerning a hæmophylic patient, the bleeding (from which organ not stated) disappeared after three doses.

2002. *Mikhailoff on Salicylate of Bismuth in Chronic Diarrhœa.*—In the *Meditz.*, No. 2, 1889, p. 1, Dr. S. Mikhailoff, of St. Petersburg, warmly recommends the treatment of obstinate chronic diarrhœa by the internal administration of salicylate of bismuth, in six-grain doses, given thrice a day. He adduces, for the sake of illustration, a striking case of a gentleman, aged 55, who had been suffering and treated from diarrhœa since he was 25, when he had had an attack of Asiatic cholera. After all possible means had been successively tried in vain (by numberless doctors of 'several generations'), the administration of the salicylate was followed in a week by a marked improvement, and in a few weeks by permanent cure (about 1½ year passed since the disappearance of his diarrhœa). The case is regarded by Dr. Mikhailoff as 'some affection of the large bowel,' depending upon 'some morbid fermentation.' The drug was selected (in view of researches by Vulpian, Bouchard, and Dujardin-Beaumetz) as one of such antiseptic substances that may pass through the upper portion of the digestive tracts in a more or less undecomposed state. The author adds that he obtained singularly excellent results in a good number of cases of the sort.

2003. *Ossovsky on Creolin Enemata in Dysentery.*—In the *Vratch*, No. 14, 1889, p. 329, Dr Nikolai P. Ossovsky, of Tobolsk, West Siberia, writes that the statements by Max Kortuem, Esmarch, Neudoerfer, &c., have induced him to try creolin in sixteen successive cases of epidemic dysentery of a severe description, all occurring in soldiers. The drug was used in the shape of enemata made of from 5 to 8 fluid pounds of a half per cent. solution, and administered usually twice, but sometimes three and even four times, daily. On each occasion the patient was placed *à la vache* (*vide infra*) with his abdominal muscles as relaxed as possible; the fluid was injected from a funnel connected by means of a long India-rubber tube with another long, soft, elastic tube inserted high up into the rectum. Of the sixteen patients, two were convalescent at the time of the communication, the remaining fourteen recovered. In nine cases, sanguinolent stools ceased on the third day of the treatment; in two, on the fifth; in one, on the sixth; in one on the ninth; while in three they became bloodless after two enemata. The general deductions drawn by the author from his observations may be given thus. 1. High enemata made of a half per cent. creolin solution possess unmistakably powerful disinfecting properties. 2. At the same time they appear to be by far safer (less toxic) than those of carbolic acid or corrosive sublimate (in solutions of a corresponding strength). 3. The enemata produce a hæmostatic action on the intestinal wall, while being free from any irritant local effects. 4. Acute cases as characterised by a sudden onset of symptoms, very frequent tenesmus, and profuse bloody discharge, run a more rapid and more favourable course than subacute ones developing slowly and accompanied by mucoid stools. 5. Creolin enemata, however, fail sometimes to prevent a consecutive development of catarrh of the large bowel. In such cases, the creolin treatment should be followed by washing out the intestines with tepid water and subsequently by high enemata made of a half per cent. solution of acetate of lead, or a 1 or 2 per cent. solution of tannic acid. A decoction of bark with Glauberian salt should be simultaneously administered internally. 6. In cases where dysentery is complicated with malaria (as it was in ten out of the author's sixteen cases), creolin enemata seem to convert a latent malarial poisoning into a typical one as characterised by distinct febrile paroxysms. The latter usually make their appearance immediately after the cessation of sanguinolent stools, to yield to the ordinary quinine treatment. 7. The enemata also give good results in infantile dysentery and cholera. 8. The treatment never gives rise to any unpleasant accessory effects (even when the enema is retained in the bowel for many hours). Dr. Ossovsky adds (1) that Dr. M. M. Kolokoloff, of Tobolsk, has similarly treated twelve cases of dysentery with most satisfactory results; and (2) that irrigations of surgical wounds with a 2 per cent. solution (emulsion) of creolin represent a powerful disinfectant means free from any drawbacks (toxic effects, local irritation, &c.). [The position *à la vache* was chosen by Dr. Ossovsky in view of Dr. K. E. Vagner's experiments, according to which this posture causes the lowest fall of the intra-abdominal pressure. *Vide* the *Vratch*, Nos. 12, 13, and 14, 1888.—*Rep.*]

2004. *Mitropolsky on Regulation of Breathing in Sea-Sickness.*—In the therapeutic weekly *Novosti Terapii*, No. 13, 1889, p. 203, Dr. Ivan A. Mitropolsky, of Moscow, warmly recommends, on the ground of his personal experience, the following simple method for preventing or aborting all symptoms of sea-sickness. As soon as giddiness, nausea, &c., appear, the author shuts his eyes and begins to make deep and slow inspirations and expirations. In a few moments (sometimes after three or four respiratory cycles) the symptoms disappear, to yield to a comfortable subjective sensation. On their reappearance the same procedure is repeated again and again. If the recurrence be rather frequent, it is better to perform the procedure in a recumbent posture (with closed eyes). Since the time the author has begun to practise the method he never yet suffered from vomiting when on board. [Dr. Mitropolsky seems to think that the means proposed by him is novel. Meanwhile, in the *Brit. Med. Jour.*, March 24, 1888, p. 676, he will find a very interesting note by Dr. J. J. Leiser, in which the writer says (1) that sea-sickness is caused by irregular or imperfect respiration, leading, necessarily, to an inadequate aëration of the patient's blood, which consequently becomes poisonous to his brain and gives rise to sympathetic sickness; (2) that a system of regular, free breathing prevents sickness or rapidly relieves it; and (3) that his experiments were successfully repeated by Drs. G. C. Stockman and C. W. C. Prentice, who, having selected ten suffering passengers, each seated himself with five of them and 'timed the breathing in the following manner: they (the doctors) raised the hand from the knee, indicating an inspiration, and down again for an expiration, thus timing the respirations to exactly twenty per minute. At the expiration of one hour the active symptoms in each case had entirely subsided.' By this time the doctors had thoroughly educated their patients in the *modus operandi* of the cure. The cases continued to be permanent 'cures' during the remainder of the voyage from Queenstown to the United States. The writers conclude by asserting that 'the cure is infallible in all cases that persist in carrying it out.'—*Rep.*]

V. Idelson, M.D.

2005. *Liegeois on the Therapeutical Application of Veratrum Viride.*—The author speaks highly of the properties of *veratrum viride* in palpitation of the heart due to various causes, especially in cases of functional origin. It also gives good results in palpitations associated with cardiac hypertrophy resulting from valvular or peripheral lesions. He claims that veratrum is indicated in the following conditions:—(1) In functional palpitation and arhythmia, accompanied by heightened arterial pressure; (2) in palpitation and arhythmia due to organic valvular lesions during the period of hypersystole; (3) in palpitation and arhythmia during the first stage of the so-called arterial or vascular heart disease. The alkaloid (veratrine) of white veratrum only slows the heart and lowers arterial tension when given in doses not exceeding 4 to 5 mg. ($\frac{1}{16}$ to $\frac{1}{12}$ grain), and this dose must be repeated every four or six hours in order to maintain the effect. Unfortunately these doses are apt to prove extremely irritating and even emeto-cathartic. The *veratrum viride*, on the other hand, does not give rise to these distressing symptoms and, like strophanthus, may be given for weeks together if a sufficient interval be allowed to elapse between each dose, and, provided that the dose be not excessive, no cumulative effect is produced, and tolerance is not established.

2006. *Hammerschlag on Formula against Migraine.*—℞ Caffein citratis, 16 grs.; phenacetine, ʒss.; sacch. pulv., 16 grs. To be made into ten powders, one of which should be taken every two or three hours, until the attack ceases.

2007. *Imossi on Iodine in the Treatment of Warts.* Given to adults, in doses of ten drops twice daily, the tincture of iodine has proved very successful in preventing the further development of warts and causing those already present to disappear. Dr. Imossi remarked, in the ten cases which had come under his observation, that the treatment produced striking emaciation, a fact which he has since turned to account in the treatment of obesity. He has succeeded in procuring a diminution of weight of about twelve pounds in three weeks.

2008. *Bouchut on Relief of Chronic Coryza.*—Dr. Bouchut recommends the following snuff for the relief of chronic coryza:—℞ Hyd. subchlor., 1 part; hydrag. oxid. rub., 1 part; pulv. sacchari., 20 parts. Misce.

2009. *Bucquoy's Anti-dyspeptic Mixture.*—Dr. Bucquoy recommends a tablespoonful of the following mixture, to be taken before each of the two principal meals :—℞ Liq. arsenicalis, ♏xv., tinct. nucis. vom., ʒss., syrup. picis., ℥x.

2010. *Calvelli on Erysipelas.*—Picric acid (1 in 200) has been largely employed by Dr. Calvelli as a topical application in erysipelas, applied by means of a camel's hair brush every two or three hours.

2011. *Poulet on Bronchial Asthma.*—In bronchial asthma Dr. Poulet prescribes a tablespoonful of the following mixture, to be taken every hour until relief is obtained :—℞ Oxalic acid, ʒss., syrup of orange peel, ℥ij., infusion of tea, ℥vj.

ALFRED S. GUBB.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2012. SYKES, W., AND TWIGG, F. G.—Case of Poisoning by New 'Sickerheit' Explosive. (*Brit. Med. Jour.*, July 20, 1889.)

2013. NICHOLSON, FRANK, M.D.—A Severe Case of Opium Poisoning. (*Brit. Med. Jour.*, July 20, 1889.)

2014. BROUARDEL, PROFESSOR.—Chronic Poisoning by Arsenic.

2015. LOWNDES, F. W.—A Case of Infanticide. (*Liverpool Med. Chirurg. Jour.*, No. 17, July 1889.)

2016. CLEVELAND, DR. A., M.D.—Case of Poisoning by Water Gas, with New Method of Treatment. (*Boston Med. and Surg. Jour.*, July 11, 1889.)

2017. LEIDY, JOSEPH, JUN., M.D.—A Case of Petroleum-Ether Poisoning. (*Therapeutic Gazette*, July 15, 1889.)

2018. REYNOLDS, ERNEST, M.D.—Homicidal Chloral-Poisoning. (*Brit. Med. Jour.*, Aug. 3, 1889.)

2019. COPEMAN, S. M., M.B.—On the Medico-Legal Detection of Human Blood. (*Brit. Med. Jour.*, July 27, 1889.)

2020. FÜRTH, E.—A Case of Antifebrin-poisoning. (*Wiener med. Presse*, No. 16, 1889.)

2021. TUCZEK, F.—A Severe Case of Antipyrin-poisoning in a Child. (*Berliner klin. Wochensch.*, No. 17, 1889.)

2022. KHAKANOFF, DR.—Toxic Effects from Antifebrin. (*Mediẗsinskï Preglëd*, Nos. 1 and 2, 1889, p. 24.)

ART. 2012. *Sykes and Twigg on Poisoning by New 'Sickerheit' Explosive.*—'Sickerheit' explosive is a German patent for blasting in coal mines, &c. The patient in question, a man aged 33, was engaged in mixing the ingredients in a steam bath, during which process noxious fumes are given off. The patient had only been engaged at the work two whole days when he came to the doctors complaining of frontal headache, of being very short of breath on exertion, and of being 'muddled' in his mind. He was deeply cyanosed, pulse 99, jerky, blood purplish black in colour, under the microscope red corpuscles crenated ; first sound of heart indistinct, blood-vessels of fundus oculi unusually dark in colour and dilated, temperature slightly raised, urine dark orange brown, acid, specific gravity 1030, no sugar. The treatment consisted of exposure to free air and sunlight, and absence from the mixing room, and in the course of two days he had completely recovered his natural appearance. It is stated that similar cases had occurred at the works, but the reporters were unable to get details.

2013. *Nicholson on a Case of Opium Poisoning.*—A widow, aged 42, was brought to the infirmary at 2.45 P.M. one day, having at 12 noon swallowed one ounce of laudanum ; she had been able to walk to the infirmary with the aid of the police. When admitted she was very drowsy, but could be roused to answer questions ; her pupils were contracted to pins'-points ; pulse small, 132 ; respirations, 12. The stomach was freely washed out with warm water, and, whilst this was being done, atrop. sulph. gr. $\frac{1}{60}$, and apomorph gr. $\frac{1}{10}$, were given hypodermically. The contents of the stomach smelt slightly of opium. In half an hour, in spite of the patient being made to walk about and flicked with a towel, she became more drowsy, and the respirations fell to 8. Atrop. sulph. gr. $\frac{1}{30}$ was injected, and a pint of strong coffee administered by enema, and the interrupted current was applied to the sides of the neck and over the heart. The coma became deeper, the pupils dilated (presumably owing to the atropine), and the respirations fell to 4, the pulse being 112. Atrop. sulph. gr. $\frac{1}{60}$ was again injected. The patient's state remained much the same, the battery being constantly applied. At 7 P.M. ether ʒij. was given subcutaneously. An hour later she began to revive, and in another hour she was fairly aroused. A pint of strong coffee was then given her, and another at midnight, after which she was allowed to go to bed, being aroused at intervals through the night. She completely recovered.

2014. *Brouardel on Chronic Poisoning by Arsenic.* At a recent meeting of the Académie de Médecine, Paris, Professor Brouardel made a communication on the subject of chronic arsenical poisoning based on an investigation into groups of cases that had occurred at Hyères and Havre. After premising that the symptoms were the same whether the poisoning was acute or chronic, he divided the symptoms into certain stages of which the first consisted of symptoms referable to the digestive disturbances, simple malaise with gastric derangement with or without fever ; the vomiting possessed certain special characters inasmuch as it was without pain in the stomach, supervened suddenly, was apt to be copious and frequent, and might be bile-tinged ; constipation was commoner than diarrhœa, and the stools might contain blood. In the next stage laryngo-bronchial catarrh was the chief thing, hoarseness being often a prominent symptom, and with it sibilus and rhonchus in the chest and mucous expectoration. Redness and swelling of the eyelids, coryza, lacrimation, and suffusion of the conjunctivæ were also present, together with swelling of the scrotum erythema in various parts of the body, desquamation of the skin, falling out of the nails, a vesicular urticarious or rubeolous eruption and pigmentation. In the third stage a persistent general headache was the most prominent feature, numbness in the legs and feet, cramps and intense pain in the legs generally in the neighbourhood of the joints. The general sensibility of the legs was a little dulled, the arms were similarly affected, but to a less extent ; the special nerves of sensation were unaffected. The fourth and last stage, the period of paralysis, commenced with general weakness, the patient having at first a difficulty in walking, especially in going upstairs ; this gradually increasing he would finally become quite helpless. The weakness commenced and was most marked in the extensor communis digitorum, and the other muscles belonging to the group on the front of the leg, and the affected muscles underwent a certain amount of atrophy; faradic excitability was lost or diminished in the affected muscles, whilst to galvanism a large number of cells was required to produce any effect, and then the contraction was sluggish. The tendon reflexes in the legs were absent, the cutaneous reflexes were less affected, the plantar were diminished, but the cremasteric and abdominal were generally of normal intensity. Death in these cases was generally due to heart failure which might happen without any valvular lesion. When paralysis supervened the case was always tedious and recovery might take a year before it was completely established.

2015. *Lowndes on a Case of Infanticide.*—The case which Mr. Lowndes reports is one of great interest and importance in a medico-legal point of view. The body of a newborn male infant was found in a coal cellar. The body was perfectly clean, as if it had been washed. A man's scarf was found tied tightly round the neck. The lungs presented every appearance of having respired; bloody froth exuded from them on incision, and they floated even after strong compression. The stomach was empty, and all the internal viscera were congested, showing that the child had not died from umbilical hæmorrhage. Around the neck in the course of the scarf were distinct ecchymoses; but the chief interest was in the condition of the cord, for about half an inch from the navel it was perfectly fresh; then came the usual mark of demarcation, and the remainder of the cord, about 2½ inches, was completely mummified. The weather was cold at the time, and there was reason to believe that the birth had taken place eleven or twelve days beforehand. Mr. Lowndes arrived at the opinion, from the state of the cord, that the child had survived its birth for at least twenty-four hours, an opinion in which Mr. Paul, who assisted him, fully agreed. A domestic servant who had shown signs of recent delivery, and who had been suspected to be pregnant previously, was tried for the murder, but was acquitted of this charge, and convicted of concealment of birth.

2016. *Cleveland on the Successful Treatment of a Case of Poisoning by Water Gas.*—The chief difference between water gas and coal gas is in the percentage of carbonic oxide they contain, the latter containing 5·53 and the former 27·46 per cent. of this gas. The patient whose case is here reported was a woman poisoned by the gas leaking into her bedroom during the night. When Dr. Cleveland saw her she had been under treatment for some six hours; artificial respiration had been kept up nearly the whole time, she had been exposed to a free current of air, oxygen had been administered by inhalation, hypodermics of atropine, ammonia, and other heart-stimulants had been applied, but without benefit. The patient was deeply comatose, countenance livid, extremities and all the exposed parts of the body cold; the pulse would beat eight or ten times with fair fulness and then run down to a mere flutter, and for a moment be entirely lost at the wrist; the respiration corresponded with the pulse. It was decided to transfuse: accordingly the median cephalic vein was opened, and about ten ounces of blood were allowed to flow; ten ounces of milk were slowly injected into the vein. Two hours after the operation there was a marked improvement in the appearance of the patient, and, four and a half hours after she swallowed and retained stimulants, and eventually made a good recovery. Commenting on the treatment, Dr. Cleveland observes that, owing to the presence of carbonic oxide in the blood, the integrity of the red corpuscles was destroyed, and they could no longer absorb oxygen, consequently artificial respiration and even the inhalation of pure oxygen were of no benefit; it therefore seemed desirable to first reduce the quantity of carbonic oxide in the blood and then to dilute the remaining portion, at the same time maintaining a suitable degree of venous tension. These objects were obtained by bleeding and subsequent transfusion.

2017. *Leidy, Jun., on a Case of Petroleum-Ether Poisoning.*—The patient, a young man of 19, had been ordered to clean out a large oil-tank, the substance used being petroleum-ether, or benzine. He was found soon after lying on the ground in an unconscious state, and was taken to the hospital. A new hand at the work, he had evidently used the substance in too large a quantity, for he was found soon after in the condition described, and, as his fellow-workmen supposed, dead. Active means for resuscitation were resorted to, but with no avail; while a conveyance was being sought to take him to his home he was seen to move. On admission to the hospital he was unconscious, pulse strong and full—60; respirations 14, very feeble, almost imperceptible; slight cyanosis; the body was cold, the pupils were widely dilated, and did not react to light; nystagmus was present. Paralysis of lower extremities, with incontinence of urine and fæces; the upper extremities resisted movements. Artificial respiration and friction of the body and extremities with mustard were immediately resorted to, and kept up for half an hour, when spontaneous breathing was re-established. In an hour and a half from the time of his admission he opened his eyes and spoke, complaining of frontal headache. Next morning he was practically well.

2018. *Reynolds on Homicidal Chloral-Poisoning.*—The following report on the so-called Manchester Cab Mystery will be of interest to our readers. The deceased had been spending the day in Manchester, and had partaken freely of alcohol. At 6.20 P.M. he entered a cab with Chas. Parton, who was subsequently convicted of his murder, and they were driven to a public-house, where they each had a glass of beer. Parton was seen to put a liquid out of a small bottle into one of the glasses of beer. At 7.20 they re-entered the cab, and in the opinion of the driver the deceased was then sober; fifteen minutes later the driver found the door open and the deceased alone inside, with his head fallen forward on the front seat. He could be roused and could speak. His valuables were missing. The cabman drove to the Infirmary, but on arrival his 'fare' was found to be dead. The *post mortem* examination was made at 3 P.M. next day, when *rigor mortis* was well marked. On opening the body there was a strong smell of alcohol. The heart was a little dilated, and contained dark fluid blood; microscopically, slight fatty degeneration of its muscular walls was found; there were a few patches of atheroma on the mitral valve and in the aorta, but all the valves acted well. The mouth and œsophagus were normal. The stomach was slightly congested, and showed a few small submucous ecchymoses; it contained about ten ounces of a yellowish fluid smelling strongly of beer; the contents of the intestines also smelt of alcohol. In the contents of the stomach and of the upper part of the intestines analysis revealed the presence of chloral. Death was evidently due to syncope, the fatal effects of the chloral being probably accelerated by the already existing cardiac depression, which it is fair to surmise may have been present from excess of alcohol. The dose of chloral administered was not ascertained; but it need not have been large, for in a heart already weakened by slight fatty degeneration and by a large dose of alcohol the tendency of even moderate doses of chloral would be undoubtedly to cause death more readily by heart failure.

2019. *Copeman on the Medico-Legal Detection of Human Blood.*—Having noticed that in the blood of persons suffering from pernicious anæmia, crystals of hæmoglobin were formed in a thin film of blood placed on a slide, Dr. Copeman determined to try and obtain crystals from ordinary blood by diluting it, and he found that when blood was diluted with serum obtained from sheep's blood which had been allowed to stand till it was somewhat decomposed, crystals of reduced hæmoglobin were produced. They consisted of rectangular plates of a pink or claret colour, or greenish if the layer of blood was very thin. With the exception of the monkey, the blood of the lower animals when it crystallises at all, does so in the form of oxy-hæmoglobin, not the reduced form, and as between monkey's and human blood the diagnosis was always easy, because the crystals in the latter instance would always be rectangular, and in the former diamond shaped, of which two adjoining sides would be longer than the other two. The blood of many of the domestic animals, however, does not crystallise when treated in the manner above described, but it would not be safe, in the absence of other evidence, to assert that, because the blood did not crystallise, therefore it could not be human. Gamgee's method should then be resorted to. It consists of adding to defibrinated blood, about one-sixteenth of its volume of ether, and shaking the mixture until it becomes perfectly laky; it should then be set aside in a cool place, and in the course of a few hours, or two or three days, crystals form in abundance. The crystals thus obtained are radiating crystals of oxy-hæmoglobin. When human blood is treated in this way, it either does not crystallise at all, or only to a very slight extent, the crystals being rectangular and consisting of reduced hæmoglobin. Of the other proposed tests he has not formed a high opinion. Instead of the decomposing serum, pericardial fluid may be used. Dr. Copeman has not yet been successful in adapting his test to stale blood stains, but he is confident that the method will prove as reliable in their case as in the case of fresh blood.

2020. *Fürth on a Case of Antifebrin-poisoning.*—At the advice of a friend a girl took four grammes (a drachm) of antifebrin. Nausea and vomiting ensued; the patient became unconscious; and the usual pathognostic symptoms ensued—viz., icy coldness of the skin, weak, rapid pulse, deep-blue coloration of the face, hands, and feet, dilated pupils, spasms, grinding of the teeth, delirium, and finally coma. The comatose state lasted three hours, but perfect consciousness was not regained till eight hours after the dose. Gradual recovery followed. The blueness of the skin lasted 24 hours; the patient was two days in bed.

2021. *Tuczek on a Case of Antipyrin-poisoning in a Child.*—The patient, a little boy aged 4 years, was Dr. Tuczek's own son, and the antipyrin was given for whooping-cough, to the amount of 1·2 grammes (18·5 grains) daily (in three doses) for three weeks (!). The child was of sound constitution. After an attack of vomiting he became somnolent, and, while in deep stupor, violent epileptiform convulsive attacks, both partial and complete, with gnashings of the teeth and jactations. The type of respiration was peculiar, the heart's action was arhythmic, the pupils were dilated, a macular exanthema appeared, the temperature was subnormal, and the pulse was delayed and tense. After three days from the vomiting the convulsions gradually ceased, and the child then steadily recovered. Antipyrin is thus evidently a cumulative poison, like alcohol, lead, absinthe, ergot of rye, CS_2, and probably cocaine. It should be added that the above case showed acetonuria. E. J. Edwardes, M.D.

2022. *Khakanoff on Toxic Effects from Antifebrin.*—Dr. Khakanoff, of Sophia, Bulgaria, details (Bulgarian *Meditsinski Pregled*, Nos. 1 and 2, 1889, p. 24) the case of a lady who, while suffering from menstrual pain, took two 1-gramme doses of antifebrin (one at bed-time, another early on the next day). Shortly after the second dose there appeared malaise, intense facial cyanosis, difficult breathing, irregular cardiac action, filiform pulse, convulsive twitchings about the face, mouth, and body; fall of the temperature (35·40 C.). The author, who had been fetched without delay, administered various stimulants and analeptics, and applied heat (hot bottles, &c.). The symptoms decreased gradually about the nightfall, when also a profuse diuresis suddenly took place. On the next morning the patient woke up in her usual good health. No unpleasant symptoms had been ever produced in the lady by antipyrin taken in 1-gramme doses (on account of the neuralgia). Dr. Khakanoff draws attention to—1, that the administration of antifebrin requires caution, since the drug is far from being innocuous; in addition, its physiological action is not yet sufficiently clear, while antidotes are totally unknown. 2. In some patients (as in the case above) the drug acts as a powerful diuretic, the skin remaining quite dry. In other cases it gives rise to profuse perspiration. Whether antifebrin can simultaneously produce in the same subject diaphoresis and diuresis is doubtful. [Dr. Molloff, of Sophia, similarly adduces (*ibid.*, p. 25) two cases from his own practice, in which the drug, given in the dose of 0·5 gramme, produced intense collapse, accompanied with scanty perspiration (but without any cyanosis), the symptoms swiftly yielding to stimulants.—*Rep.*]

V. Idelson, M.D.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

RECENT PAPERS.

2023. Thorner, Dr. Max.—Hæmatoma of the Septum Narium. (*The Med. News*, May 4, 1889.)

2024. Randall, Dr. B. Alex.—Cocaine-poisoning from Intranasal Application. (Reprint from *Philadelphia University Med. Magazine*, April 1889.)

2025. Ferguson, H. L.—Two Cases of Distension of the Frontal Sinus. (Reprinted from the *New Zealand Med. Jour.*)

2026. Solis-Cohen, J.—Common Membranous Sore-throat. (Reprint from the *New York Med. Jour.*, March 23, 1889.)

2027. Knight, Charles H.—Congenital Bony Occlusion of the Posterior Nares. (*The Med. News*, Nov. 10, 1888.)

2028. Daly, W. H.—On some Mild Measures in the Treatment of Intranasal Hypertrophies and Inflammations. (*The Med. and Surgical Reporter*, Nov. 17, 1888.)

2029. Baber, E. Cresswell.—Note on a Case of Rhinolith. (*Jour. of the Respiratory Organs*, May 1889.)

2030. Silk, J. Fredk. W.—Notes on the Choice of Anæsthetics in Naso-pharyngeal Operations. (*Jour. of Laryngology and Rhinology*, May 1889.)

2031. Stoker, George.—On Anæsthetics in Operations on the Nose and Throat. (*Ibid.*)

2032. Blumenau, Dr. Evgeny B.—Oil of Peppermint in Suppurative Otitis. (*Novosti Terapii*, No. 15, 1889, p. 223.)

2033. Pasalsky, Dr. Anton A.—Cocaine and Boracic Acid in Rhinitis and Nasal Polyps. (*Novosti Terapii*, No. 13, 1889, p. 205.)

Art. 2023. *Thorner on Hæmatoma of the Septum Narium.*—Dr. Max Thorner (*Med. News*, May 4, 1889) relates a case of symmetrical bilateral hæmatoma of the nasal septum due to a blow on the nose. Incision was practised on one side and blood evacuated. On the swelling recurring, the patient refused further surgical interference, but applied poultices. An abscess resulted which, on healing, left not only a small perforation of the septum, but a thickening around the opening, no doubt due to simultaneous perichondritis.

2024. *Randall on Cocaine Poisoning from Intranasal Application.*—Dr. A. B. Randall relates a case (*Philadelphia University Medical Magazine*, April 1889) of a boy aged 6 years, in whom about 5 minims of a 10 per cent. solution applied on pledgets of cotton-wool to the nasal cavities produced delirium with hallucinations, marked tremor, subsultus, and dilatation of the pupils. These symptoms passed off during the night, and the child awoke the next morning with only a feeling of weakness.

2025. *Ferguson on Distension of the Frontal Sinus.*—Mr. H. L. Ferguson, of Dunedin (*New Zealand Medical Journal*) relates two interesting cases of this affection. In Case 1, a man aged 35, the right eye was depressed three-quarters of an inch, and projected half an inch forward. Above the eye, in the inner angle of the orbit, was a tumour about the size of a walnut, seemingly firmly adherent to the root of the orbit, and of almost bony hardness. The tumour was tapped with a small trochar, and some very viscid greenish-brown fluid was drawn off with considerable difficulty. A free opening being subsequently made into the tumour, the finger passed into the frontal sinus through an opening with sharp edges in the roof of the orbit, and a similar hole of almost the same size existed in the inner wall of the orbit. The case did well, but slight diplopia when looking strongly down and to the left side was noted more than six months after. In Case 2, a lady aged 43, the right eye protruded half an inch, as compared with the left, almost directly forwards, if anything slightly outwards. No tumour could be felt in the orbit. The disc was typically choked. Thinking that the case was one of tumour of the optic nerve, the author divided the internal rectus, and explored the nerve without finding any tumour. An opening, however, was found on the roof of the orbit, through which the finger could be passed into the frontal sinus. About half an ounce of thin sero-purulent fluid was thus evacuated, and the eye began to pulsate synchronously with the brain. It was therefore concluded that there was an abscess of the frontal sinus, communicating with the cranial cavity. The internal rectus was stitched together, and the wound closed. There was subsequent orbital cellulitis, and a free incision through the swollen lid had to be made, which liberated much pus. A vulcanite drainage-tube was kept in. A free discharge of pus through the nasal cavity also occurred a day or two after. The position of the eye greatly improved, and the discharge from the wound almost ceased. The optic neuritis was seen to be subsiding. The author draws attention to two special points of interest in this case. First, the optic neuritis, which he considers due to basic meningitis; and, secondly, the entire absence of any tumour in the orbit to account for the proptosis. In this case, the immense swelling at the time of the second operation rendered Lawson's operation (*i.e.* draining the sinus into the nasal cavity) impossible, and the subsequent discharge from the nose made it unnecessary. Whether, as the dura mater was exposed by the abscess, it would have been justifiable to open up a communication between it and the nasal cavity through which germs might enter, the author considers doubtful.

2026. *Cohen on Common Membranous Sore-throat.*—In the treatment of common membranous sore-throat, which Dr. J. Solis Cohen (*New York Med. Jour.*, March 23, 1889) endeavours to distinguish from diphtheria by the mildness of the symptoms, combined with a high temperature, 103 to 105, and by the absence of the history of a possible exposure to diphtheria, he recommends antiseptic and detergent sprays of borax, boric acid, carbolic acid, permanganate of potash, &c. In strumous and tubercular cases he advises the application every day or two of dilute acids, internally iron and cinchona preparations, also arsenic and nux vomica, and opium in small doses as a nervous tonic. In the rare cases in which the larynx becomes involved tracheotomy or intubation may be necessary.

2027. *Knight on Occlusion of the Posterior Nares.*—In a paper on congenital bony occlusion of the posterior nares, Dr. Charles H. Knight (the *Medical News*, Nov. 10, 1888) divides the causes of this defect as follows:—1. Exostoses or simple hypertrophy of the osseous structure of the turbinated body, middle or inferior. 2. A ridge or exostosis springing from the vomer. 3. An adventitious plate of bone developed from the floor or the outer wall of the nasal cavity. The author records a case in which the right choana was occluded by means of a bony septum. On palpation it was found that the left palate bone extended fully one quarter of an inch further back than the right. By firm pressure it was possible to determine that the posterior margin of the latter was much thicker than that of its fellow. A portion of the septum was removed with a nasal trephine attached to an electric motor. The removed crown measured antero-posteriorly ¼-inch at its lower and ⅛-inch at its upper part. The patient was afterwards able to breathe through the right nostril, but not always with perfect freedom, and the author candidly admits that since the operation the patient suffers inconvenience from accumulation and drying up of secretion in the nostril which she did not before.

The operation, however, remained incomplete as the patient objected to any further drilling.

2028. *Daly on the Treatment of Intranasal Hypertrophies and Inflammations.*—Dr. Daly, of Pittsburgh, Pa., recommends (the *Medical and Surgical Reporter*, Nov. 17, 1888) incisions and punctures in every case in which there is a contra-indication to the more radical measures ordinarily used. [The author speaks in one case of a 'bagging hypertrophy of the soft tissues over the inferior turbinates anteriorly,' which appears to be more of the nature of simple swelling of the erectile tissue.—*Rep.*]

2029. *Baber on a Case of Rhinolith.*—In this case (*Journal of the Respiratory Organs*, May 1889), which is the third of this character described by Mr. Cresswell Baber, the calculus was situated deep in the inferior meatus, and could be seen from the back as well as from the front. The rhinolith was removed partly without and partly with general anæsthesia. Its nucleus was formed by a large glass bead, and its total weight when dry amounted to 16 grains.

2030. *Silk on Anæsthetics in Naso-pharyngeal Operations.*—Dr. J. F. W. Silk (*Journal of Laryngology and Rhinology*, May 1889) after considering the relative advantages and disadvantages of the ordinary anæsthetics arrives at the following conclusions :—1. That the possibility of using nitrous oxide should always be considered in naso-pharyngeal operations of short duration. 2. Failing this, the advantages and disadvantages of ether, and, by preference, of the combined method, should be carefully weighed before deciding the question. 3. That chloroform, though so frequently used, has over and above the objections made to it upon general grounds, drawbacks special to these particular operations, and when employed its use should, especially in prolonged operations, be limited to the primary induction of narcosis, substituting ether at as early a stage as possible.

2031. *Stoker on Anæsthetics in Operations on the Nose and Throat.*—Mr. Geo. Stoker (*Journal of Laryngology and Rhinology*, May 1889) employs nitrous oxide in the removal of tonsils. In the administration of anæsthetics he recommends the 'head-extended position,' *i.e.* with the head hanging over a thick triangular or wedge-shaped cushion, with a view to preventing the entrance of blood into the larynx. He suggests that in this method we have a means of intralaryngeal operation without prolonged preparation or training of the larynx to render the passage of instruments possible. In certain intranasal operations he also employs preliminary plugging of the posterior nares. E. Cresswell Baber, M.B.

2032. *Blumenau on Oil of Peppermint in Suppurative Otitis Media.*—In the *Lancet*, March 17 and 24, 1888, p. 512, Dr. W. Leonard Braddon has published a very valuable paper on oil of peppermint, in which he forcibly draws attention to the fact that the substance 'forms the best, safest, and most agreeable of all known antiseptics'; that it is 'as powerful as, but more diffusible and penetrating than, corrosive sublimate, absolutely harmless to the system even in the largest doses, easily attainable, and readily prepared'; and that, besides, it has 'a special property of checking suppuration.' The perusal of Dr. Braddon's paper induced Dr. Evgeny B. Blumenau, of St. Petersburg (*Novostī Terapīī*, No. 15, 1889, p. 223), to immediately try the oil in a series of cases of acute and chronic purulent inflammations of the tympanic cavity. He used it in the shape of a mixture with oil of sweet almonds. (℞ Olei menthæ piperitæ gtt. ij.–iv., solve in olei amygdal. dulcium ʒj. S.), which was instilled into the ear for from ten to fifteen minutes once daily. On each occasion the ear was subsequently syringed out with tepid water, after which a woollen twist, 2 or 3 millimètres thick, well soaked in the solution, was inserted into the meatus and left therein until the next instillation. The results were invariably most satisfactory, which is ascribed by Dr. Blumenau to an 'enormous diffusibility of the oil,' as well as to its antiseptic and anodyne properties, and its power of checking the pus formation. He adduces a case of offensive profuse otorrhœa of three years' standing, which had obstinately defied a persistent treatment by all ordinary antiseptics, but was permanently and completely cured in two or three weeks by the oil employed in the way indicated.

2033. *Pasalsky on Cocaine and Boracic Acid in Rhinitis and Nasal Polyps.*—In the *Novostī Terapīī*, No. 13, 1889, p. 205, Dr. Anton A. Pasalsky, of Alexandria, in Egypt, states that he treats all cases of rhinitis and nasal polyps by means of painting the nasal cavity with a solution of cocaine and boracic acid, prepared after the following formula: ℞ cocaini, gr. iv.; acidi boracici, gr. v.; aquæ, ℥ij.; glycerini, fl. gr. xvi. M. The treatment should be continued systematically for several weeks. The results are said to be excellent, even in exceedingly obstinate cases. V. Idelson, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

2034. Bulkley, L. D.—On Unusual Methods of acquiring Syphilis. (*Philadelphia Med. News*, March 2 and 9, 1889.)

2035. Pospelow.—On Extra-genital Syphilitic Infection. (*Archiv für Derm. und Syph.*, Heft 1 and 2, 1889.)

2036. Szadek.—The Treatment of Chronic Urethritis. (*Archiv für Derm. und Syph.*, Heft 2, 1889.)

2037. Di Bella and Ingria.—Gonorrhœa in Women. (*Gazz. degli Ospitali* and *Archiv für Derm. und Syph.*, Heft 2, 1889.)

2038. V. Dusch.—Infectious Colpitis in Young Children. (*Deutsche med. Wochensch.*, and *Archiv für Derm. und Syph.*, Heft 2, 1889.)

2039. Barker, F. R.—An Outbreak of Syphilis following on Tattooing. (*Ibid.*, May 4, 1889.)

2040. Suckling.—Hemiplegia from Inherited Syphilis. (*Lancet*, May 4, 1889.)

2041. Turner, G. R.—Syphilitic Pachymeningitis of Cervical Enlargement of Cord. (*Ibid.*, May 18, 1889.)

2042. Turner, G. R.—Periphlebitic Gumma following Injury. (*Ibid.*)

2043. Barié, Dr.—On Syphilis of the Intestines. (*Rev. Gén. de Clin. et de Thérap.*, June 13, 1889.)

Art. 2034. *Bulkley on Unusual Methods of acquiring Syphilis.*—The author divides cases of non-venereal infection of syphilis into—(1) *Syphilis economica*, where, in the ordinary economic relations of domestic and industrial life, the disease is transmitted innocently from one person to another; (2) *Syphilis brephotrophica*, where the disease is acquired by or from infants, in connection with their nourishment and care; (3) *Syphilis technica*, where the opportunity for the transference of the poison occurs in connection with various forms of body-service, medical and surgical, or of like nature. Dr. Bulkley tabulates 66 cases of extra-genital chancre which have been under his own observation, and gives in detail 11 of them in illustration of various points in connection with the three divisions named above. The paper contains also many useful and interesting remarks on the subject of non-venereal syphilis.

2035. *Pospelow on Extra-genital Syphilitic Infection.*— Professor Pospelow, physician to the Mjassnitzky Hospital of Moscow, in a very long paper on this subject, gives an account of 198 cases of syphilis in which the primary sore was situated on various parts of the body excluding the genital organs. The cases were all treated in the Mjassnitzky Hospital during the ten years 1878–1887, and as this hospital is a special one for syphilitic patients of the working classes, and particularly domestic servants, the author thinks that these cases give a fair idea of the extent of extra-genital syphilis among this class of the population of Moscow. The seat of the initial lesion in the 198 cases was as follows:—The lip in 49 (20 men and 29 women); the gum in 1 (man); the tongue in 3 (1 man and 2 women); the throat in 46 (14 men and 32 women); the breast in 69 (all women); the chin in 1 (woman); the eyelids in 3 (men); the nose in 1 (man); the buttocks in 10 (men); the anus in 5 (women); the upper extremity in 6 (3 men and 3 women); and the lower extremity in 4 (women). The paper concludes with an abstract of literature bearing on the subject, extending over twenty pages.

2036. *Szadek on the Treatment of Chronic Urethritis.*—The treatment recommended by Dr. Szadek for certain cases of chronic urethritis consists in the use of sounds coated with an ointment composed of nitrate of silver, 1½ to 4½ grains; white wax, 1 drachm; lanoline, 5 drachms. The sound is allowed to remain in the urethra at first from three to five minutes, gradually increased to fifteen or twenty minutes, and repeated not oftener than every other day. When any acute symptoms are present the treatment is contra-indicated, and localised erosions or granular patches should be previously treated by means of the endoscope. Of thirty cases treated by the author in this manner during the last two years, eighteen were cured—eleven without any other treatment, and seven with the addition of astringent injections; three were not cured, and nine were markedly benefited. Besides these the same method of treatment was carried out in five cases of sexual neurasthenia, spermatorrhœa, and partial impotence: the result in these is not stated. In order to derive the full amount of benefit from the treatment a period varying from three to eight weeks is necessary. In most of the author's cases the duration was about six weeks, but in two instances sixteen weeks elapsed before cure was effected. The sole complication that occurred was epididymitis, and that in one case only.

2037. *Di Bella and Ingria on Gonorrhœa in Women.*—From the observation of 276 cases the authors found urethritis to be the most common gonorrhœal affection in women; next in frequency came gonorrhœal metritis, and next to this vaginitis. The authors also report the occurrence of a primary uncomplicated gonorrhœal 'Bartholinitis.' This they admit is a relatively rare affection.

2038. *Dusch on Infectious Colpitis in Young Children.*—Dr. von Dusch treated in the children's hospital at Heidelberg, from 1886 to 1888, nineteen children from one and a half to twelve years old for an infectious catarrh of the vagina and vulva, which he considered to be of gonorrhœal nature. Neisser's gonococcus was constantly found in the discharge and in three cases the parents suffered from gonorrhœa. That the malady was highly infectious was shown by the occurrence of an epidemic of nine cases in the hospital. Children who had scarlatina, or who had shortly before suffered from that disease, were attacked by preference, and this agrees with the experience of Fränkel, who also observed an epidemic of infectious colpitis in the children's department of the Hamburg general hospital in 1881–84. As regards treatment, children who suffer from this form of colpitis must be isolated, and the vagina washed out with anti-parasitic lotions. The affection is very obstinate, and only nine of Dr. Dusch's nineteen cases were completely cured. These required a period of treatment varying from three to ten weeks, the average being seven weeks.

2039. *Barker on Syphilis following Tattooing.*—Surgeon F. R. Barker records the cases of twenty-three soldiers known to have been tattooed on various dates, from May to August 1888, by a man who was examined by Surgeon Barker on October 13, and found to have mucous tubercles of the buccal mucous membrane and ulceration of the palate. He had also a scar on the penis and an eruption on the chest. The man owned that he had wetted his finger and rubbed it on the wounds, and that he might have put the needles used for tattooing in his mouth. Of the twenty-three cases known to have been tattooed by this man twelve contracted syphilis, and these twelve, so far as could be ascertained, had not previously had the disease. Two were stated to have contracted syphilis; but they deserted, and all trace of them was lost. Four men who had previously had syphilis did not contract the disease. Five others escaped, although the author states that they had never had syphilis previously. Each of these five denied that the tattooer had put the needles in his mouth, or used his saliva in any way. The age of the soldiers ranged from 18 to 22 years, and they were all healthy men. The incubation period varied from thirteen to eighty-seven days, and in three cases which were tattooed on the same day the incubation period was twenty-nine, forty-seven, and fifty-nine days respectively. There was no relation between the length of incubation and the severity of the symptoms. In all the eleven men who came under the author's own observation the site of inoculation was the forearm. In six of these both limbs were tattooed at the same time, but in no case did ulceration occur on more than one. In five cases the sores at the site of inoculation were rupial in appearance. The number of primary sores varied from one to four. The subsequent lesions noted were uniform in all the cases—namely, enlarged glands, rash, sore throat, condylomata, and mucous tubercles, and usually in the order named. The cases did well under treatment by mercury and iodide of potassium. [From Surgeon Barker's able and interesting report of this unfortunate outbreak of syphilis it does not appear that any of the cases came under medical observation earlier than October, although all were tattooed between May and August. Thus the evidence respecting the earlier phenomena, including the very remarkable one of eighty-seven days' incubation, would seem to rest solely on the statements made by the patients themselves.—*Rep.*]

2040. *Suckling on Hemiplegia from Inherited Syphilis.*—At a meeting of the Midland Medical Society on March 20, Dr. Suckling showed a boy, aged 3 years, who had been under his care when three months old, with snuffles and mucous tubercles around the anus and mouth. When the patient was 2 years old choroiditis disseminata and nystagmus were discovered. The child did well on iodide of potassium and grey powder. A few weeks ago the child complained of headache, and shortly afterwards became hemiplegic. The movements on the paralysed side [whether right or left is not stated] were weak and tremulous. The choroiditis remained as before.

2041. *Turner on a Case of Syphilitic Pachymeningitis of Cervical Enlargement of Cord following Injury.*—A sailor, aged 25, six weeks before his admission in the Seamen's Hospital at Greenwich, fell down the hold of a ship and injured his left knee. He fainted away at the time of the accident, but soon recovered consciousness. He had also a small tumour of the upper lip which was removed and found to be 'a fibroma undergoing myxomatous degeneration.' About eight weeks after the accident and two weeks after admission, the patient complained of pain and numbness along the back of the neck and in both arms. He suffered also from indigestion and pain after food. There were no motor symptoms of any kind. The numbness had extended in a fortnight's time to the right side of the thorax and abdomen, and so he remained for another month when he complained of diplopia. The right external rectus was found to be paralysed, but no other muscle was affected. The pupils, slightly dilated, acted to light. The fundus of the eye was normal. Sensation in the arms, right side of thorax, and abdomen, was still impaired. Ankle clonus on both sides was well marked; the reflexes were normal. He was able to walk in the dark and could feel the ground well, but his gait was peculiar. About three days later the left external rectus became paralysed, but no other ocular muscle was affected. He denied syphilis, and there was no evidence of it about him. Iodide of potassium and perchloride of mercury were prescribed, in increasing doses, and the iodide was pushed until its physiological effects were well marked. Improvement slowly took place. The right external rectus recovered before the left; the numbness of the arms and right side of the chest and abdomen gradually decreased and disappeared except in the left little finger, and this recovered after his discharge. The ankle clonus also disappeared. He had been on specific treatment for three months before his final recovery. When last seen as an out-patient he was quite well, but was still continuing 'a mild course of specific treatment.' Mr. Turner believes this to have been a case of syphilitic pachymeningitis in which the posterior nerve-roots were chiefly involved, and in which 'injury, and possibly slight hæmorrhage, had made the parts susceptible to the syphilitic poison.' He also remarks that the affection of the external recti alone of the ocular muscles, and the effect of anti-syphilitic treatment make the diagnosis almost a certainty.

2042. *Turner on Periphlebitic Gumma following Injury.*—Under this title is recorded the case of a sailor, aged 31, admitted into the Seamen's Hospital on Dec. 12, 1887. Six months previously he had contracted a chancre, but there was no clear history of syphilis. On Dec. 1 his left thigh began to swell and became painful, and he could feel a hard cord extending from the inner side of the knee to the groin. In June 1887 he had fallen down the hold of a ship on his left hip and buttock. On admission, there was a hard mass of glands in the left groin, extending below Poupart's ligament, and the skin was red, tender, and swollen. There was very slight œdema of the thigh. The apparent bubo burst shortly after admission and discharged unhealthy pus, but showed no tendency to heal. On Feb. 29, 1888, the mass was incised, and a quantity of fibrinous-looking material mixed with decomposing blood-clot was removed. From the bottom of the cavity was removed 'what was evidently a blood-cast of the femoral vein;' the pulsation of the artery to the outer side was plainly felt. The cavity was plugged with a sponge and dusted with iodoform. There was no bleeding. About a fortnight later the wound was covered with a diphtheritic-looking membrane, and then followed increased swelling and suppuration, and burrowing of matter. Early in April fresh ulceration was observed in the neighbourhood of the wound, and this slowly spread. 'Large doses' [quantity not stated] of iodide of potassium were now given. The effect of this ('small doses' had already been prescribed) was 'almost magical.' The cavity filled in and the parts rapidly healed. When discharged on June 20 he was quite well, with the exception of some thickening at the upper part of the thigh and slight œdema of the thigh and leg. Dr. Delépine examined the blood-clot that was removed, and reported that there was no trace of the coat of the vessel. The author remarks that the doubt in this case is whether syphilis or injury destroyed the coat of the femoral vein; but he thinks it almost certain that the injury caused inflammation and clotting of blood, and that 'his syphilis attacked him in this his place of least resistance.' The appearance and spreading of the ulceration alone pointed to the diagnosis. ARTHUR COOPER.

2043. *Barié on Syphilis of the Intestines.*—The author insists upon the fact that little or no attention has been devoted to the study of syphilitic affections of the intestine, and he suggests that their supposed rarity may in reality be due to a lack of knowledge of the subject. He had collected a number of observations in which the subjects of syphilis, either hereditary or acquired, exhibited undoubted syphilitic lesions of one or other part of the intestines, sometimes simply enlargement of the Peyer's patches, more frequently, numerous ulcerated patches. He mentions more particularly the case of a woman, 32 years of age, who was admitted into a hospital in a state of stupor, with a history of severe headache and general fatigue of a month's duration. The abdomen was tympanitic, painful on pressure, especially in the right iliac fossa. Profuse yellow fœtid stools. Temperature, 38°·2 C. Notwithstanding the typhoid symptoms no rash could be discovered. Coma supervened, followed by death. *Post mortem*: a number of ulcerations were found in the neighbourhood of the cæcum, with irregular excavated borders, the base being a whitish grey, and covered with purulent matters. Two other ulcers were discovered in the transverse colon, the sigmoid flexure, and the descending colon. The mesenteric glands were not appreciably enlarged. The diagnosis of the syphilitic origin of these ulcers was arrived at by a process of elimination. He points out that intestinal syphilis attacks the terminal portion of the small and the large intestine in preference, its effects being localised in the collections of lymphoid tissue. It produces ulcers with thickened borders, filled with a yellow puriform material, and all the coats of the gut are involved in the morbid process. Clinically, the affection gives rise to an obstinate and profuse diarrhœa, the stools being yellow, fœtid, and, from time to time, sanguinolent. In some cases the diarrhœa brings about emaciation, cachexia, and death from exhaustion, but in others it takes on an acute form, and then markedly resembles typhoid fever. In the latter, the differential diagnosis is very difficult. Perforation, with consequent peritonitis, is a frequent complication.

Alfred S. Gubb.

MEDICAL CHEMISTRY.

RECENT PAPERS.

2044. Von der Velden.—On Hypersecretion and Hyperacidity of the Gastric Juice. (*Samm. klin. Vorträge*, No. 280.)

2045. Honigmann and Noorden.—Presence of Hydrochloric Acid in a Case of Carcinoma of Stomach. (*Zeit. für klin. Med.*, vol. xiii., p. 87.)

2046. Wolff and Ewald.—On the Absence of Free Hydrochloric Acid in the Contents of the Stomach. (*Berliner klin. Wochensch.*, p. 546, 1887.)

2047. Günzburg.—On a new Method of Detecting Free Hydrochloric Acid in Gastric Juice. (*Centralbl. für klin. Med.*, p. 738, 1887.)

2048. Carles, P.—Decomposition of Solutions of Iodoform. (*Der Fortschritt*, April 5, 1889.)

2049. Merget, Professor.—Test for Mercury in Animal Secretions. (*Der Fortschritt*, April 5, 1889.)

2050. Crismes, M.—On Safranine, a New Test for Glucose. (*Bull. Gén. de Thérap.*, June 15, 1889.)

Art. 2044. *Von der Velden on Hypersecretion and Hyperacidity of the Gastric Juice.*—Von der Velden reports three cases of hypersecretion of hydrochloric acid, *i.e.* cases in which the acid is in excess during digestion. The symptoms were acid vomiting three or four hours after food, epigastric weight and pain, headache, and heaviness. When fasting the stomach was empty. In two cases there was gastric catarrh, and in one case gastric ulcer; three similar cases of gastric ulcer were alluded to. It seems to be well established that with gastric ulcer this hypersecretion of acid exists and may be a very potent factor in their production.

2045. *Honigmann and Noorden on Presence of Hydrochloric Acid in a Case of Carcinoma of Stomach.*—Honigmann and Noorden find that the fluid obtained from a cancerous stomach during digestion contains a trace of mineral acid, but it neither turns methyl violet blue nor will it digest albumen. The explanation appears to be that the hydrochloric acid is combined with the peptones, and the test fails when the relative proportion of the former to the latter is decreased. With cancer the peptones are not increased, but the hydrochloric acid is diminished and never increased as is often the case with simple dilatation.

2046. *Wolff and Ewald on the Absence of Free Hydrochloric Acid in the Contents of the Stomach.*—Wolff and Ewald report eight cases of old people free from cancer who had no hydrochloric acid in their stomach contents, showing that its absence is not diagnostic of gastric carcinoma.

2047. *Günzburg on a New Method of Detecting Free Hydrochloric Acid in Gastric Juice.*—Günzburg proposes the following as a simple and inexpensive method of examining the filtered stomach contents for free hydrochloric acid. Make a solution of phoroglucine 2 grammes, vanilline 1 gramme, and absolute alcohol 30 grammes. To a few drops of the solution add an equal quantity of the filtered contents and evaporate in a porcelain dish over a spirit lamp without boiling. With 1 in 10,000 of hydrochloric acid, crystals of a poppy-red colour are obtained, and with half the strength they are streaked with red. The organic acids give no reaction. G. N. Pitt, M.D.

2048. *Carles on Decomposition of Solutions of Iodoform.*—In making saturated solutions of iodoform in ether, one remarks that when the solution approaches saturation, it becomes very unstable, and under the influence of very slight causes it decomposes suddenly, acquiring a reddish colour like tincture of iodine. Iodine in fact is set free, as may be shown by pouring several drops on a piece of writing paper, when a blue colour (iodide of starch) is produced. On renewing the experiment with different specimens of iodoform and ether, it is found that the stability of the solutions is very capricious, but that the decomposition is more retarded, the less concentrated is the solution; and for saturated solutions in ether, the more alcohol there is in the ether, and the less the mixture is exposed to the light. The quantity of iodine, however, set free is very little. To be convinced of this it is sufficient to shake quickly the solution with a globule of mercury. This metal precipitates at once the free metalloid in the form of insoluble iodide of mercury, and the ethereal solution acquires at the same time a much greater stability. Solutions of iodoform in chloroform behave in the same way. The surgeon can safely make use of the brown solutions, the proportion of free iodine being very minute.

2049. *Merget on Test for Mercury in Animal Secretions.*—The proceeding indicated by the author comprises three steps. 1. Treatment of the material by nitric acid. 2. Precipitation of the mercury by copper. 3. Recognition of the metal by the reaction of its vapour on paper sensitised by ammoniacal nitrate of silver. 1. Nitric acid of medium concentration is to be added to the material to be analysed (saliva, urine, milk, fæcal matters, contents of stomach or bowel or viscera suitably divided, for urine 1 vol. of acid to 15 to 20 vol. of urine). It is then boiled for some minutes if it is a liquid secretion, such as urine or saliva, or longer if the material is solid, or becomes so on boiling. Under these conditions the mercury becomes a nitrate, and the author, by means of comparative experiments, is assured that the proportion made soluble is the same as if the organic material had been destroyed by hydrochloric acid and chlorate of potash. Before precipitating by copper the mercury thus liberated, the degree of acidity of the solution must be determined. A bit of copper immersed in it ought not to cause the disengagement of gaseous bubbles; if it does, the acidity must be corrected with carbonate of ammonia. This done, the liquid is to be put into a narrow-necked flask, and a blade of copper, obtained by flattening with a hammer a copper wire of about 1 millimètre in diameter, is to be introduced into it. The wire should be previously cleaned by immersion in nitric acid and then well washed. In about thirty-six hours all the mercury is deposited. The copper blade being then taken out, washed with distilled water, and carefully dried, is at once to be applied to the paper sensitised with ammoniacal nitrate of silver. This paper must have been dried in the dark. It is to be folded in two, and to insure the contact of the copper with its two surfaces it is to be submitted to moderate pressure, such as may be obtained by placing it in the middle of an ordinary-sized book. If the amalgamation is much, the reaction is instantaneous, but requires a few minutes if the quantity of mercury is small. 0·01 milligramme of mercury in a saline solution, representing a volume of 100 cubic centimètres, may be thus discovered. The impression on the sensitised paper is very characteristic of mercury, for in the manner described arsenic alone is precipitated like mercury is, and, as it has no effect on the sensitised paper, it can give rise to no error. This proceeding may also be applied to the examination of mercury in certain drugs. As it is simple, much the most practical, and surpassed by no method in sensibility and exactitude, it is to be recommended to practitioners. G. D'Arcy Adams, M.D.

2050. *Crismes on Safranine, a New Test for Glucose.*—The safranines belong to the colouring agents obtained by the oxidisation of the nitric derivatives of toluidine. Ten grammes of safranine are dissolved in 100 grammes of water. A few drops of a solution of glucose are introduced into 2 or 3 cubic centimètres of the safranine solution, and 2 or 3 cubic centimètres of caustic soda (1 in 10) added. The whole is then warmed at a temperature of 60° C., the safranine is reduced, forming a colourless solution, which, when cold, precipitates. After the lapse of a certain period of time, the colour of the safranine is restored by the oxygen of the air. Safranine has the advantage of not being acted upon by uric acid and various other substances which reduce Fehling's solution. Albumen, however, reduces it, but much more slowly than glucose.

Alfred S. Gubb.

OPHTHALMOLOGY.

RECENT PAPERS.

2051. Ramsay, A. Maitland.—On a Case of Retinitis Albuminurica with Pigmentary Changes. (*Glasgow Med. Jour*, May 1889.)

2052. Gast, Dr. R.—A Case of Congenital Ophthalmoplegia Externa. (*Klin. Monatsbl. für Augenheilk.*, June 1889.)

2053. Galezowski.—On Suspension in Locomotor Ataxy. (*Rec. d'Ophthal.*, May 1889.)

2054. Gessner, Dr. Carl.—Enophthalmos passing into Exophthalmos on Lowering the Head. (*Centralbl. für prakt. Augenh.*, June 1889.)

Art. 2051. *Ramsay on a Case of Retinitis Albuminurica with Pigmentary Changes.*—It is not our intention to give an abstract of this paper, for it is so free from superfluous matter that it would suffer from being condensed, but we wish to call the attention of our readers to it, as it gives a remarkably clear description of some of the pathological changes that take place, and the morbid appearances that are to be seen in advanced albuminuric retinitis. The chromo-lithographs are certainly not good, but if seen (as they probably are intended to be) by gaslight, they are not so irretrievably bad as they appear to be by daylight.

2052. *Gast on a Case of Congenital Ophthalmoplegia Externa.*—The patient was a woman, aged 33, who presented herself on account of a slight attack of conjunctivitis. It was found that both eyes were immovable. There was partial ptosis on both sides, the lids covering the upper third of the pupil, and the vertical measurement of the palpebral fissures being only 6 millimètres. The pupils measured 3 millimètres in ordinary daylight, and acted well to direct light, consensually, and with accommodation, V. 20-30ths in each eye; the power of accommodation was normal. The visual axes were parallel, not the slightest trace of convergence could be elicited, but there was no diplopia for near objects (it is not stated which image was suppressed, or whether it was always the same one). A prism of only 2° produced diplopia in whatever direction it was turned when there was a coloured glass before the other eye. Complete immobility of the eyes was said to have been noticed immediately after birth, and to have persisted ever since. The general health appeared to be perfect; there were no other nerve-lesions. It would be interesting in a case such as this to learn what are the conditions which lead the patient to use one or the other eye, and to what extent binocular vision existed or could be produced.

2053. *Galezowski on Suspension in Locomotor Ataxy.*—In a short communication the author refers to the results which he has seen from this treatment in Dr. Charcot's practice. As regards most of the ataxic symptoms they were very good, but even in the most successful cases, no effect was produced on the ocular symptoms. The condition of the pupils and of the optic discs remained absolutely unchanged. This is only what might have been expected, but it is well that the fact should be placed on record as the result of actual experiment.

2054. *Gessner on Enophthalmos passing into Exophthalmos on Lowering the Head.*—The patient was a girl, aged 19. When the head was erect the right eye was about a millimètre deeper in the orbit than the left; the palpebral fissure is said to have been equal on the two sides, but the enophthalmos was noticeable at a distance of 5 or 6 mètres. There was myopia of 2 D in each eye. V. 6-9ths. Fundus normal. If the patient bent the head forwards for half a minute to a minute, the right eye protruded 4-5 millimètres beyond the left, and a painful feeling of pressure was experienced. The conjunctival veins became much distended, and the lids, tightly stretched over the globe, could not be closed. The region of the orbit at the same time assumed a bluish-red colour, which was especially marked above. The movements could not be tested on account of the pain that they caused. The protrusion was reducible by the slight pressure made to ascertain the tension, and it subsided as soon as the head was held erect. Ophthalmoscopic examination during the presence of the protrusion was not feasible. The occurrence of the protrusion was said to have been first noticed at the age of 15, when menstruation commenced. There was no history of injury, and nothing abnormal was discovered in any other organ. The author attributes the exophthalmos to a varicose enlargement of the orbit veins, and the enophthalmos to the absorption of the orbital fat caused by the pressure of these. Cases of protrusion of eye coming on only when the head is lowered have been previously recorded; so far, we believe, no opportunity has occurred of examining the parts in any of these cases of occasional proptosis such as that just described, or in cases in which the proptosis comes on during the movements of mastication. W. Adams Frost.

DISEASES OF CHILDREN.

RECENT PAPERS.

2055. Kaiser.—On a New Tænifuge. (*Medicinisch-Chirurg. Centralblatt*, No. 27, 1889.)

2056. Leubuscher. — Antipyrin, Antifebrin, and Phenacetin as Remedies for Whooping-cough. (*Deutsch. medizinal Zeitung*, No. 52, 1889.)

2057. Snow.—On Rickets. (*The New York Medical Record*, No. 971.)

2058. Beltz.—On the Treatment of Whooping-cough. (*Archiv für Kinderheilkunde*, Band x., Heft 5.)

2059. Jacobi. — On Rheumatism in Childhood. (*Archives of Pediatrics*, No. 66.)

2060. Holgate.—On the Treatment of Nævus by the Intra-injection of Alcohol. (*Archives of Pediatrics*, No. 66.)

2061. Townsend.—On Acute Lobar Pneumonia in Children. (*Archives of Pediatrics*, No. 63.)

2062. Jaksch, Professor von.—On the Clinical Course of Cow-pox. (*Centralbl. für die med. Wiss.*, No. 7, 1889.)

2063. Himmelfarb, Dr. A.—On the Treatment of Vaccinal Erysipelas by Resorcin. (*Novostĭ Terapĭĭ*, No. 20, 1889, p. 295.)

2064. Lewentaner, Dr.—On the Treatment of Idiopathic Croup with Turpentine. (*Bull. Gén. de Thérap.*, June 15, 1889.)

Art. 2055. *Kaiser on a New Tænifuge.*—Dr. M. Kaiser, of Neumarkt, reports in the *Medicinisch-Chirurg. Centralbl.* that a delicate-looking girl, aged 13 years, was brought to him suffering from tape-worm. He delayed his treatment of the malady for some months in order first to strengthen the child. In the meantime he read in the *American Druggist* of a safe and speedy remedy for tape-worm, viz., ol. croton 1 drop, chloroform 4·00, glycerin 40·00. He determined to try this remedy in the present case. As the patient was still very weak he gave a smaller dose and substituted castor-oil for glycerin, thus: croton oil 1 drop, chloroform 2·00, castor-oil 20·00. Half the dose was to be first given, and the other half in half-an-hour. The day before, the diet of the patient was to be very light. The father of the girl, having suffered similarly himself, was afraid of giving the dose as ordered by Kaiser, and deviated from the doctor's orders, because he feared the doses were too large for his daughter. He let the latter fast entirely for one day, and the next day divided the dose into three parts, giving them at 4 A.M., 5 A.M., and 6 A.M. respectively. The first dose brought on slight vertigo, but the second and third caused no disturbance. The patient objected neither to the taste nor odour of the medicine. At 6.30 A.M. the first stool occurred without any difficulty; the fæces contained proglottides. At 9 A.M. the tape-worm, rolled into a ball, was quickly and easily passed. There were no further stools. The patient ate a hearty dinner and the appetite has remained good since. The bowels remained regular. The tape-worm was nearly 2 mètres in length. The advantages of this method are thus summed up by Kaiser:—1. It renders the preparatory treatment unnecessary. 2. The drugs are easily got and the dose easily prepared. 3. The medicine is not disagreeable to the taste and is of no great volume. 4. It is cheap. 5. There is no fear of bad after-effects. He asks his professional colleagues to try the medicine and to report on the results.

2056. *Leubuscher on Antipyrin, Antifebrin, and Phenacetin as Remedies for Whooping-cough.*—The *Deutsch. medizinal Zeitung* notices an article by Dr. Leubuscher, of Jena, in the *Centralbl. für. klin. Medizin*, on whooping-cough. Leubuscher is convinced that Sonnenberger, who first recommended antipyrin as a specific in whooping-cough, has over-estimated the value of this drug. No doubt, if given early, it has an influence on the course of the disease, so that there are at most six or seven attacks of less intensity within twenty-four hours, and the cough is cured in three or four weeks. But antipyrin does not prevent the cough being caught by children of the same family. And at the height of the disease antipyrin is just as useless as any other medicine. Leubuscher has found antifebrin give quite as good results as antipyrin, but does not recommend it on account of the danger arising from a long-continued use of it. Phenacetin is pronounced by Leubuscher to be perfectly useless. The reporter of the *Medizinal Zeitung* agrees with Leubuscher that antipyrin shortens the course of the cough and reduces the violence of the attacks; but this is nothing more, he says, than is gained by Michael's insufflation and by the use of quinine.
John Elliott.

2057. *Snow on Rickets.*—The observations were made in Buffalo, N.Y., and their object was to determine the truth of the statement commonly made by physicians that rickets is essentially an European disease and is rare in America. The author examined 25 children under 3 years of age at the Fitch Dispensary, and 10 presented well-marked symptoms of rickets; in two orphan asylums 33 children under 3 years of age were examined and no less than 13 were rachitic, or altogether 40 per cent. All the children who laboured under this affection were, with three exceptions, of foreign parentage, and all were either brought up artificially or, if nourished at the breast, were given starchy foods in addition. The remainder of the paper is occupied by a general description of the disease.

2058. *Beltz on the Treatment of Whooping-cough.*—The author, following Sommerbrodt and Hack, regards the paroxysms of this complaint as being a reflex neurosis from the nerve-endings in the mucous membrane of the nose; he therefore treated a number of cases by insufflation. The notes of each are given, with the number of paroxysms for each day as long as the child was under observation. The following is one taken at random. The child was 5 years old, and of delicate appearance. She was first seen a week after the commencement of the whoop, and the paroxysms were as follows, the first figure being the day and the second the number of paroxysms. She was ordered three insufflations a week for three weeks, when strengthening medicine was substituted. Thus: 1—45, 2—16, 3—17, 4—15, 5—10, 6—12, 7—11, 8—10, 9—6, 10—6, 11—6, 12—6, 13—9, 14—7, 15—7, 16—13, 17—10, 18—8, 19—7, 20—8, 21—8, 22—9, 23—13, 24—13, 25—10, 26—10, 27—7, 28—6, and so gradually diminishing until the fiftieth day passed without any paroxysm. In some cases the reduction was much more rapid. The nasal mucous membrane was affected more or less in every case examined, mostly, however, in the form of simple catarrh. The treatment was found most beneficial when adopted either in the very beginning, or else after a duration of six weeks of the complaint. The insufflation was usually administered every other day, but in some cases every day. Its formula was nitrate of silver, 1 part; magnesia, 9 parts: mix.

2059. *Jacobi on Rheumatism in Childhood.*—Acute articular rheumatism is a frequent disease in infancy and childhood. The author made this assertion fourteen years ago and still adheres to it, and he points, in confirmation of it, to the frequency of left valvular disease in young subjects who have not had scarlatina. The temperature is usually only slightly elevated and sometimes rises at irregular times such as noon. The swelling of the joints is apt to be trifling and may be overlooked, and the pain and tenderness may be very much less than that resulting even from rachitis when only a single joint is involved. The diagnosis is very difficult. 'Growing pains' often means rheumatism. Rheumatism is very apt to make its appearance during and after infectious diseases, such as diphtheria, scarlatina, enteric, dysentery, and erysipelas. Sudden changes of temperature will frequently induce it, and the bare knees and calves of the children of vain mothers are foolhardy provocations. The swollen and painful joints must be protected against the pressure of the bedclothes by keeping the limbs in a basket and covering them thickly with cotton. If the pain is very severe, an ice bladder or cloth is advisable, unless the patient be very young or anæmic, when cold water should take the place of the ice. Sometimes a 2 to 4 per cent. solution of cocaine, or chloroform liniment brushed on the skin, or even a mild galvanic current must be resorted to for the relief of pain. For the chronic swelling of the synovial membrane, which often follows the acute attack, nothing is so good as the application twice daily of one part of iodoform in from 8 to 15 of collodion. It is brushed copiously over the swollen part and allowed to dry while the limb is kept absolutely at rest for ten minutes. Internally, salicylate of sodium should be given. A child of three years may take from six to ten grains every three hours for one or more days. Unless marked benefit is obtained within five days, it should be discontinued. Chronic articular rheumatism is rare in childhood. The treatment is similar to that of the same disease in the adult. Salicylate of sodium must be given in those cases only which exhibit acute exacerbation. Other cases require colchicum, aconite, or iodides over a long period. Small doses of arsenious acid, 1-300 to 1-500 grain, every two or three hours will answer well.

2060. *Holgate on the Treatment of Nævus by the Intra-injection of Alcohol.*—The object of the author was to avoid the unsightly scar which follows ordinary efficient treatment. The patient was a boy, aged 4 years, and the nævus—which was the size of half a filbert, and which was still growing—was situated on the right *ala nasi*, at the lower margin of which it became pendulous. November 17, 1885.—An eyelid clamp was applied, and a subcutaneous injection of 5 to 7 minims of 95 per cent. alcohol was made into the centre of the tumour. The result was its complete solidification; but three more injections were required before the case was finally cured. No scar whatever was left. A second patient, 2 months old, was treated in the same way in December 1886. The nævus was on the breast, and circulation was controlled by the pressure of a ring. A single injection was made, and this not only arrested the growth but caused the disappearance of the tumour. A little discoloration remains now (January 1889), but no scar. The author suggests that this treatment may be found useful for goître.

2061. *Townsend on Acute Lobar Pneumonia in Children.*—The author begins by agreeing with Loomis and others that this form of pneumonia is much commoner in children than is usually believed. His notes comprise 42 cases, all under 10 years of age, with an average age of about 3½ years. Of these only two died, and in these the pneumonia was double. The sexes were divided into 26 males and 16 females. The site of the lesion was in 15 cases the left base, in 13 the right base, in 7 the right apex, in 3 the left apex, and in 4 both lungs. The onset in the child is as sudden as in the adult, but the rigor is usually replaced by vomiting. This occurred in 31 of the cases, convulsions in 3, chilliness in 9, and true rigor only in 3 patients—all boys, and aged 7, 10, and 10. Pain is usually present, but is rarely referred, even by older children, to the affected side. Rusty sputum was uniformly absent. On the other hand, the continued high temperature was found almost as constantly as in adults. Of 37 cases, in which a complete morning and evening thermometric record was obtained, 29 ended by crisis and 8 by lysis; the crisis occurring in 2 on the third day, in 3 on the fifth day, in 5 on the sixth day, in 11 on the seventh day, in 3 on the eighth day, in 1 each on the ninth, twelfth, and fourteenth days, and in 2 on the thirteenth day. The lowest maximum temperature was 103°, the highest 106°·2.

RALPH W. LEFTWICH, M.D.

2062. *Jaksch on the Clinical Course of Cow-pox.*—Contrary to the observations of others, Professor von Jaksch (Gratz) never found the temperature raised during the first day or two after vaccination. During the first few hours it was even slightly subnormal; between the 45th and the 164th hours the first febrile rise, of stair-form on the chart; the acme varied from 38° C. to 40°·5 C. The duration of the fever was between one and eleven days, the average duration being from four to six days. The course was distinctly remittent, and the decline was characterised on the charts by the stair-form (like the rise), and always ended below the normal. The fever was independent of the intensity and stage of the local affection. Pulse-frequency and respiration were usually increased. The urine was free from pathological constituents, its quantity was often undiminished, and its specific gravity not raised; it was only lessened after the fever was over. The symptoms of disease caused by vaccination are certainly not due to the local affection; cow-pox is an infectious disease *sui generis*. Vaccination is without danger before, during, and after other diseases; this is of importance to remember in epidemics.

E. J. EDWARDES, M.D.

2063. *Himmelfarb on Resorcin in Vaccinal Erysipelas.*—In the *Novosti Terapii*, No. 20, 1889, p. 295, Dr. A. Himmelfarb states that during the last spring he happened to come across unusually numerous cases of erysipelatoid inflammation in vaccinated infants, which, curiously enough, made its appearance 'invariably on the eleventh day after the vaccination.' In all cases of the kind the author employed a glycerine solution of resorcin (ʒss. to ℥j.), with which he painted every hour both the parts affected (except the vaccinal pustules, of course) and surrounding healthy skin. The results were always marvellous. Shortly after the first application the child fell into a quiet sleep (after preceding two or three sleepless nights); extreme general restlessness ceased, and in twenty-four hours redness, heat, intense induration—in short, all symptoms disappeared without leaving any trace. In some cases, accompanied by a high fever (above 40° C.), Bayer's phenacetin was simultaneously given internally, in 2-grain doses with wine, about the nightfall.

V. Idelson, M.D.

2064. *Lewentaner on the Treatment of Idiopathic Croup with Turpentine.*—For some time past the author has treated his cases of diphtheria by means of the internal administration of rectified essence of turpentine with highly satisfactory results. The first observation is that of a child, two years of age, in whom the diphtheritic process had extended into the trachea. So critical was her condition that the parents had reluctantly consented to tracheotomy being performed. Before having recourse to this last resort he determined to try Dr. Demelow's suggestion, and he gave the child a teaspoonful of rectified essence of turpentine. In about a quarter of an hour the stertorous respiration became quieter and calmer, and the little patient passed a quiet night, the aphonic cough having quite disappeared. The following day the child was practically convalescent. Case II. was also that of a little girl, 2½ years of age, who, when first seen, was almost unable to breathe, all the extraordinary muscles of respiration being called into play. Tracheotomy was not practicable, and he therefore gave the same dose of essence of turpentine. The condition of the patient soon became relatively calm, although twenty minutes before the air only passed the larynx with the greatest difficulty. The cough, which had been aphonic, became barking. The same evening, although the danger of asphyxia had disappeared, the symptoms of croup were present in all severity, but the parents refused to allow tracheotomy to be performed. Another dose of turpentine was therefore given, and on the following day the more urgent symptoms had disappeared, and all danger seemed to be past. In two days the patient was quite well. In both these cases a cutaneous eruption followed the administration of the turpentine, but no trace of renal irritation could be perceived. Case III.—On the seventh day of his illness, this patient, a boy, two years of age, was pale, livid, pulseless, and almost asphyxiated. Stenosis of the larynx was well marked. A dose of turpentine relieved the more pressing symptoms, and on following up the treatment the child gradually recovered, though noisy inspiration persisted for some time afterwards, attributed by the author to a thickening of the laryngeal tissues. Case IV.—A boy, four years of age, suffering from diphtheria since eight days. This was one case of several, for there was an epidemic of croup at the time, six of which proved fatal. He found the same condition of quasi-asphyxia, with an aphonic cough and cyanosis. A spray of turpentine, eucalyptus, and carbolic acid in alcohol was ordered, and a teaspoonful of the essence given internally. The dose was immediately followed by a violent spasmodic attack of coughing, during which an abundance of false membranes and muco-purulent expectoration was got rid of. The shreds of membrane varied in length from 1 to 3½ inches. The next day two other teaspoonfuls of the essence were given, one in the morning and one at night. Thereupon the child began to breathe more freely, took some nourishment, and slept all night except when awakened by the cough. On the second day one more dose was given without any apparent inconvenience. In four days the cure was complete.

Alfred S. Gubb.

REVIEWS.

Article 2065.

RECENT WORKS ON HEREDITY.

Essays upon Heredity and Kindred Biological Problems. By Dr. August Weismann. Translation edited by E. B. Poulton, S. Schönland, and B. E. Shipley. Oxford: Clarendon Press. 1889.

Natural Inheritance. By Francis Galton. London: Macmillan & Co. 1889.

Heredity: A Study with Special Reference to Disease. By R. A. Douglas Lithgow. London: Baillière, Tindall, & Cox. 1889.

The series of essays contained in the first work on the list is distinguished amongst the numerous papers and books of a cognate nature which have appeared in the past few years, on account of the great interest which the author's views have aroused and the controversy, especially with regard to the transmission of acquired characters, which they have provoked. Most biologists have become familiar with the essays as they appeared one by one either in their native German or in the abstracts in the pages of *Nature*. It was, however, an excellent idea to bring them together in an English dress in one volume, and we may at once say that the editors are to be congratulated on the admirable manner in which they have performed their task. The translation is all that can be desired, and the notes, with which the book might easily have been overloaded, have been appended in moderation and are a valuable addition to the text. Having said so much as to the translation, we now turn to the subject-matter, and think that our readers may be interested by a sketch of the views which run through the essays.

A unicellular organism is, as the author points out in the first essay, 'On the Duration of Life,' endowed with the potentiality of never-ending life. It reproduces itself by division, yet cannot by this act be said to have terminated its existence.

Nothing but a severe injury can cause its death, the alternatives for it being perfect integrity or complete destruction. When, however, we pass to multicellular organisms we find a change of conditions. The group becomes divided into cells of two different kinds—somatic and reproductive; the former being in a certain sense secondary to the others, which are the real bearers of life. Correlated with this differentiation of cells, normal death due to internal causes first makes its appearance. It may well be asked why, if unicellular organisms are immortal, the same should not be the lot of multicellular. The question has been considered and answered by the author. 'Worn-out individuals,' he says, 'are not only valueless to the species, but they are even harmful, for they take the place of those which are sound. Hence, by the operation of natural selection life is . . . . reduced to a length which would afford the most favourable conditions for the existence of as large a number as possible of vigorous individuals at the same time.' Death, however, though the lot of the soma, and thus of the individual, does not, or need not, affect the germ-cells born by that individual which are possessed like the unicellular organism of a potential immortality. This is what is meant by the author's hypothesis of the continuity of the germ-plasma. This substance is not formed anew in each individual in the sex-gland, but is handed directly on from the ancestors to their posterity. 'Heredity,' he says, 'is brought about by the transference from one generation to another of a substance with a definite chemical, and, above all, molecular constitution. I have called this substance "germ-plasm," and have assumed that it possesses a highly complex structure, conferring upon it the power of developing into a complex organism. I have attempted to explain heredity by supposing that in each ontogeny a part of the specific germ-plasm contained in the parent egg-cell is not used up in the construction of the body of the offspring, but is reserved unchanged for the formation of the germ-cells of the following generation.' It may here be noted that, as Wallace[*] has pointed out, Galton,[†] some years ago, propounded a very similar theory, which did not, however, attract much attention. The latter author's 'stirp' (p. 331) is the physiological basis of heredity corresponding to the germ-plasma, and a portion of it is not used in the formation of the body, but is laid aside in the germ-cells, to form a future generation. This germ-plasm is located in the nucleus, and possibly in the unstainable part only, which lies between the micro-somata, whose function may be purely nutritive.

Obviously, if this theory be true, it has a very remarkable bearing on the subject of evolution, for the transmission of acquired characteristics, and the effects of use and disuse of organs and parts which have been credited with a share in the production of species can no longer be allowed this important function, save, possibly, in a very minor degree. For it is obvious that if the germ-plasm is laid down in the body of the embryo long before birth, it cannot be directly affected by external conditions. Consequently, characteristics acquired from external causes or from occupation by the parents, cannot be handed down to the children. This, of course, opens up the question of the heredity of acquired conditions, now so warmly contested by opposing parties. Much attention, naturally, is devoted to it in the essays under review, to which we must refer the reader anxious for more information than can be conveyed in a few lines. It must be first understood that disease is left out of the question. The term 'acquired' is confined to those characters which owe their origin to external influences, and not to those which depend upon 'the mysterious relationship between the different hereditary tendencies which meet in the fertilised ovum.' The best example of what is meant by an acquired characteristic is to be found in a mutilation, such as an amputation or circumcision, characters which 'do not arise from any tendency contained in the germ, but are merely the reaction of the body under external influences,' and are 'purely somatogenic.' That such characters are non-transmissible is the author's thesis, and, in defending it, he criticises those various supposed instances which so frequently make their appearance in articles on heredity, of which the best known are the one-horned cow and Brown-Séquard's guinea-pigs. Moreover, he brings forward a series of experiments of his own on white mice, which, though purely negative in their results, have their bearing on the question at issue. Besides such characters as these, he states that 'even the apparently powerful factors in transformation—the use and disuse of organs, the results of practice or neglect—cannot now be regarded as possessing any direct transforming influence upon a species. And the same is true of all the other direct influences, such as nutrition, light, moisture, and that combination of different influences which we call climate.' In his last essay the author appears to permit of some slight though indirect action of external influences, when he states that 'there are actual phenomena of variation which must depend upon such a gradual and at first imperceptible change in the germ-plasma, a change which does not become visible in the descendants until after the lapse of generations. It is therefore possible to imagine that the modifying effects of external influences upon the germ-plasm may be gradual and may increase in the course of generations, so that visible changes in the body (*soma*) are not produced until the effects have reached a certain intensity.' Galton (*Natural Inheritance*) appears on this point to agree in the main with Weismann. He says, 'It is extremely difficult to see how acquired faculties can be inherited by the children. It would be less difficult to conceive of their inheritance by the grandchildren.' From all which we may conclude that parents have very little to say to the construction of their children, save as the carriers of the germs, out of which they are produced, and the nourishers of the embryo during its intra-uterine existence.

If this important channel for the introduction of variations be closed, how are we to account for their occurrence? They depend according to our author on sexual reproduction. In this connection it becomes necessary to deal with the question of the polar bodies, two of which are extruded from sexually developing ova, one only from those of a parthenogenetic type. Obviously these will have different significations. As regards the first, common to both types of ova, his theory is as follows. Every kind of histologically differentiated cell must have its own nucleoplasm; the ovum is such a cell, and contains a histogenetic nucleoplasm, which is called ovogenetic nucleoplasm, which controls the growth of the cell. When this growth is finished the ovum will contain ovogenetic and germ-plasm. The former has done its work, it cannot return from the specialised to the generalised form; it is unnecessary and perhaps harmful to development, and is consequently got rid of as the first polar body. The second is of quite different character, and is intimately bound up with the question of variation. Each germ-cell must contain the plasmata not only of its parents, but of all their ancestors, an enormous number of ancestral plasmata thus mingling in each cell, any of which may appear and predominate in the offspring, which may thus present the characteristics of its grandparents or of some remote ancestor. This is what Galton speaks of under the term of 'Particulate Inheritance.' Obviously before very many generations, a time would come when each ancestral plasm will be represented by a single unit, and further subdivision will become impossible. How rapidly they increase will be seen, when it is remembered that 1,024 are present in the tenth generation. Thus the object of the extrusion of the second polar body is to prevent the excessive accumulation of different kinds of hereditary tendencies or germ-plasms which would otherwise be necessarily produced by fertilisation. 'With the nucleus of the second polar body as many different kinds of idio-plasm are removed from the egg, as will be afterwards introduced by the sperm-nucleus; thus the second division of the egg-nucleus serves to keep constant the number of different kinds of idio-plasm, of which the germ-plasm is composed during the course of generations.' If this be true of the female germ-cell, it follows that some similar occurrences must take place in the male, but how this is effected is not at present quite clear. We now see how variations may come in. It is a matter of chance, to use the common term, which ancestral plasmata out of a large number may be thrown out of a given cell and which retained. And, as it is highly improbable that precisely similar plasmata will be thrown out of two separate, fertilised ova, and the same thing happen to the spermatozoa which fertilise them, it follows that children, even of the same family, are never exactly alike. There is, it is true, an exception in the case of some twins, but this only proves the rule, since true (homologous) twins are the offspring of a single ovum, and possibly, even probably, of a single spermatozoon.

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[*] *Darwinism*, p. 443.

[†] *A Theory of Heredity. Jour. of Anthrop. Inst.*, vol. v.

Natural selection, then, works through these variations, seizing upon those likely to be of service to the race. The suppression of useless organs is explained by the action of natural selection, or, rather, by its ceasing to act, through the process which the author calls panmixia.

This is 'the suspension of the preserving influence of natural selection, when all individuals can reproduce themselves, and thus stamp their characters upon the species, and not only those which are in all respects, or in respect to some single organ, the fittest. In my opinion, the greater number of those variations, which are usually attributed to the direct influence of external conditions of life, are to be ascribed to panmixia. For example, the great variability of most domesticated animals essentially depends upon this principle.' With this view may be compared Galton's remarks on retrogression to mediocrity. Limits of space oblige us to bring this brief sketch to a close without having touched upon many other questions of interest opened up in these essays, which should be, and doubtless will be, read by all biological students.

We must devote a few words to the other two books. Mr. Galton's work, to which several allusions have already been made, is full of interest and suggestion, and is rendered doubly pleasant by the apt metaphors which this author uses so well. Much of it is occupied with mathematical considerations which cannot well be dealt with in a review such as this. The book is largely founded upon the results of the family records obtained some years ago by its author.

With reference to Dr. Lithgow's book, we have first to say that we trust, if a second edition appears, it will appear with chapters, in merciful consideration for the feelings of readers. To read a book of 247 pages without the milestones of chapters is a long-drawn agony, only comparable to the miseries of fathoming, or endeavouring to fathom, the page-long sentences of some of the less lucid German authors. For the rest, it may be said that the book consists largely of quotations from Ribot and other writers, but shows little acquaintance with modern views on the subject of heredity.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2066.

The Mechanism of the Circulation of the Blood through Organically Diseased Hearts. By HERBERT DAVIES, M.D., F.R.C.P., edited by A. T. DAVIES, B.A., M.B., M.R.C.P. London: H. K. Lewis. 1889.

THE series of papers included in this little book deals with the conditions under which it is possible for hearts with diseased valves to maintain the circulation apparently unembarrassed, and the causes which lead to a failure of such action.

The statements and deductions are chiefly based upon what the author speaks of as two fundamental laws of the circulation. 1. The corresponding chambers of the right and left hearts receive and expel their contents exactly synchronously, respectively—the two auricles contracting in unison, and dilating in unison, and the two ventricles exhibiting, respectively, synchronous action in their systole, as well as in diastole. 2. Equal volumes of blood pass, in equal and the same times, through any two corresponding orifices of the heart. From the basis of these laws the author proceeds to consider the conditions existing in hearts suffering from various valvular lesions. Short though the book is, its argument is so close and condensed, as to cause it to contain much more actual substance than is to be met with in many works of three or four times its size. We shall not attempt to reproduce any of the author's views, but commend them to the study of those interested in the scientific study of cardiac diseases.

The book contains a mathematical study of one of the problems of aortic regurgitation from the pen of the Rev. Dr. Haughton.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2067.

The Physiology of the Domestic Animals. By ROBERT MEADE SMITH, A.M., M.D. Philadelphia and London: F. A. Davis. 1889.

VETERINARY students have several English text-books of anatomy, but heretofore have been in want of a work on physiology suited to their requirements. To fill this want, which had been felt by the author and his pupils, the work under review was prepared. It contains over 900 pages, and is illustrated with numerous figures, some of which are coloured, and most of which have previously appeared in other works. As a rule these are well selected, though it may be open to question whether it is necessary or even advisable that so many or any should be given which represent animals undergoing various experiments. The figures of the dog and ox with bladders collecting secretion from pancreatic fistulæ, for example, can scarcely be of much service to students, and, on the other hand, give an opportunity for much raising of hands and pious horror on the part of the anti-vivisectionist clique. These remarks may not, however, apply to the country in which the book has its birth so much as to our own.

The work commences with the physiology of cells, containing sections on cellular structure, cellular physics, and cellular chemistry, and then proceeds to special physiology, the last part dealing with the reproductive functions.

Perhaps the most interesting part of the book to the non-veterinary reader is that which deals with the physiology of movement, and especially with the vexed question of the paces of horses. This part is well illustrated with drawings taken from Colin's work, and possesses as a kind of appendix six plates containing a large number of figures reproduced from the photographs of Mr. Muybridge, whose observations have recently attracted so much attention in this country. These figures will be of great interest and value to artists, as well as to anatomists and physiologists.

Dr. Meade Smith's book is well printed and produced; it appears to have been prepared with much care by one cognisant of the needs of students. It is likely to be of service not only to those for whom it is primarily intended, students of veterinary surgery, but also to physiological students in general as a work of reference.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2068.

Father Damien: A Journey from Cashmere to his Home in Hawaii. By EDWARD CLIFFORD. London: Macmillan & Co. 1889.

IN this little book the author does not pretend to give anything like a full account of the life and work of Father Damien, but as it is almost the only source of trustworthy information about the leper martyr of Molokai at present available we accept it with thankfulness while waiting for a more adequate record. Mr. Edward Clifford is an artist who apparently combines preaching with painting. He went to India as a missionary, and his visit to Father Damien was the result of a sudden inspiration. His account of his pilgrimage to Molokai is most interesting in spite of his shortcomings as a literary artist which are only too obvious throughout the book. Mr. Clifford tells us a good deal more about himself than about his hero; he gives his readers his opinion on Roman Catholics and on various points of controversial divinity, on the climate of India, the Falls of Niagara, the Rocky Mountains, the social characteristics of Americans, the drawbacks of sketching in public, and several other matters, with a touching simplicity which almost disarms the most aggressive critic. By far the most interesting part of the book is Father Damien's brief sketch of his work in Molokai. Though we agree with Carlyle that 'unconsciousness' is one of the essential features of the heroic character, we cannot help regretting that the apostle to the lepers did not leave a fuller account of his labours as an example and an incentive to others whom the 'enthusiasm of humanity' may lead to walk in his footsteps.

Joseph Damien de Veuster was born in the neighbourhood of Louvain on Jan. 3, 1841. On his nineteenth birthday he suddenly resolved to become a priest, and at once proceeded to carry his determination into effect without returning home to take leave of his relations. His going to the South Seas was almost an accident; his brother, who was under orders to go there, was taken ill and Damien went in his place. He worked as a missionary in different islands in the Pacific for some years, till in 1873, hearing that the lepers were without a pastor, he offered himself for the unenviable post, and started for Molokai on the same day, again without saying farewell to any one. It is impossible to fix the exact date of the importation of leprosy into the Hawaiian Islands, but in 1860 it began to spread with such fearful rapidity that it became necessary to take active measures to check its ravages. In 1866 absolute segregation was determined on; a thorough house-to-house search was made for lepers, and all persons in whom any signs of the disease were found were transported to Molokai—an island from which escape is all but impossible. The condition of these poor outcasts on Father Damien's arrival among them is best described in his own words:—'A great many had nothing but branches of castor-oil trees with which to construct their small shelters. . . . I myself was sheltered during several weeks under the single pandanus tree, which is preserved up to the present in the churchyard. Under such primitive roofs were living pell-mell, without distinction of age or sex, old and new cases, all more or less strangers to each other, those unfortunate outcasts of society. They passed their time with playing cards, hula (native dances), drinking fermented ki-root beer, home-made alcohol, and with the sequels of all this. Their clothes were far from being clean and decent, on account of the scarcity of water, which had to be brought at that time from a great distance. Many a time in fulfilling my priestly duties in their domiciles I have been compelled to run outside to breathe fresh air. . . . The miserable condition of the settlement gave it the name of a living graveyard.' If this name is no longer applicable to Molokai, the credit is chiefly due to the 'great heroic soul' who gave his life to the task of regenerating its wretched inhabitants. The young priest set himself resolutely not only to shed the light of spiritual comfort on these darkened souls, but to better their physical condition, and to reclaim them from the degraded and lawless state in which they lived; in a word, to humanise them. One of his first steps was to restore wives and husbands who had been forcibly separated to each other's society. The vast importance of this measure in promoting not only the moral but the physical welfare of the lepers was speedily apparent. A proper supply of water had next to be obtained, and great was the joy of the devoted missionary when he found a natural reservoir within easy distance of the settlements. 'He did not rest till a supply of water-pipes had been sent them, which he and all the able lepers went to work and laid.' The abolition of the secret distillation of ki, which is a highly intoxicating liquid, also engaged his attention, and he did not rest till it was entirely suppressed. He built cottages and churches with his own hands, managed accounts in a businesslike manner, tended the living and buried the dead. By these means he transformed a sink of moral and physical infamy into an industrious, law-abiding, and happy community.

When he had been at Molokai for about ten years, Father Damien began to suspect that he had himself fallen a victim to leprosy. He accidentally scalded his foot and noticed that he felt no pain. Dr. Arning confirmed his suspicions, and thenceforward the shepherd came under the same rigorous law of segregation as his flock, whom he habitually addressed not as 'my brethren,' but as 'we lepers.' His appearance a few months before his death is thus described by Mr. Clifford:—'He is now 49 years old—a thick-set, strongly built man, with black curly hair and short beard, turning grey; his countenance must have been handsome, with a full well-curved mouth, and a short, straight nose; but he is now a good deal disfigured by leprosy, though not so badly as to make it anything but a pleasure to look at his bright, sensible face. His forehead is swollen and ridged, the eyebrows are gone, the nose is somewhat sunk, and the ears are greatly enlarged. His hands and face look uneven with a sort of incipient boils, and his body also shows many signs of the disease, but he assured me that he had felt little or no pain since he had tried Dr. Goto's system of hot baths and Japanese medicine.' On March 28 of the present year he took to his bed, saying to those about him: 'You see my hands. All the wounds are healing and the crust is becoming black. You know that is a sign of death.' The disease at this time was most active in his mouth and throat. He lay on the ground on a wretched mattress, and it was with difficulty that he was induced to accept a bed. Shortly before the end the tubercles with which his face was covered totally disappeared (p. 119). He died on April 15. On one of his colleagues asking him to leave him his mantle like Elijah, the dying man whispered: 'What would you do with it? It is full of leprosy.'

Father Damien's sad yet glorious death has perhaps been even more fruitful of good to his fellow men than his life of philanthropic toil. It has stirred the heart of England to take steps to remedy a condition of things in India and many of our Colonies, which is simply disgraceful to us as a nation. Something, it is to be hoped, will now be done to ameliorate the lot of the quarter of a million of lepers in India, and the numerous sufferers from this loathsome disease in the West Indies and elsewhere. It is also certain that leprosy is spreading in various parts of the world, though the fear of its invading England to any serious extent can only be entertained by ignorant alarmists.

It is distinctly the duty of our Government to take whatever steps may be necessary to check the evil and if possible stamp out the disease. It is to be feared, however, that nothing but strict segregation will be of any use. Mr. Clifford bears testimony to the admirable manner in which the Hawaiian Government discharges its duty alike to the lepers and to the rest of the community. Those to whose hands are confided the destinies of our own country might well take example from this remote little State which, only a few years ago, was sunk in apparently hopeless barbarism.

ARTICLE 2069.

The Human Foot: Its Form and Structure, Functions and Clothing. By THOMAS S. ELLIS, Consulting Surgeon to the General Infirmary at Gloucester. J. & A. Churchill.

THIS book of 150 pages, well printed and well illustrated, is obviously the outcome of painstaking work and thought. All who devote attention to the subjects discussed will find it needful to take into account the theory and practice of the author. And whether certain of his views be adopted or opposed, it must be acknowledged that his book indicates besides the knowledge and experience of the surgeon, that perception of form which belongs to the artist, herein affording one of the numerous instances in which artistic feeling has naturally allied itself with medical knowledge, and furnished the busy practitioner with a delightful source of recreation. And the book further displays the philosophic spirit which takes pleasure in referring individual objects and actions to their natural classes, together with the possible dangers of lapsing into mere speculation.

Much practical interest belongs to Mr. Ellis's remarks on the use of the tendons which cross the sole of the foot and the exercise of the related muscles. By painful experience his attention was drawn to this subject. A horse falling upon his foot produced damage which resulted in displacement of tarsal bones and painful flattening of the arch. But adversity had its best result. Years of suffering induced an independent study of the structure and functions of the foot. He came to note that tendons, chiefly exemplified by that of the *flexor longus pollicis*, crossing beneath the arch, subtend it as a chord subtends an arc. They act as tie-rods, and when rendered tense by muscular action brace up the arch 'as certainly as tightening a bowstring increases the convexity of the bow.' This bowstring action had never, says the author, 'so far as diligent search can discover, been recognised at all until pointed out by myself' in 1874. Persevering muscular exercises carried out on the principle indicated were mainly instrumental in his own perfect restoration, and he insists that the ordinary flat foot is, by tiptoe movements, 'as one watches from month to month, permanently more arched.' This method has, indeed, become partially recognised, and we are informed by a well-known London instrument maker, who happily is capable of higher considerations than the mere manufacture of instruments, that having himself become convinced of the value of Mr. Ellis' method, he has actually dismissed several workmen previously employed in constructing apparatus for flat foot. The author insists that the recognition of such exercises might secure for the army many recruits who are now rejected because of this deformity, and in illustration gives a case of a regimental farrier.

By way of prevention, he recommends tiptoe movements in the case of persons whose occupation renders them liable to prolonged standing. In them the ligaments of the foot conform to a law applying to the tissues generally, that wasting is the result of pressure or tension too long continued. To guard against this, stretching and relaxation should rapidly alternate.

Quoting an eminent surgeon who has called it one of Nature's hardest tasks to make and maintain the arch well and strong, the author entirely disagrees, provided that fair play be given to the functions of the foot. On the other hand, he quotes from Sir James Paget the testimony of a dancing-master at Windsor, who told his pupils to stand on tip-toe whenever possible, and then they would never be flat-footed. Indeed the author believes that dancing, 'as a means of promoting the development and maintaining the strength of the foot, can hardly be over-rated.' Here, as elsewhere, he does not undertake to discuss details, nor does he offer any distinction between the artificial social practice and the more primitive method such as has been happily revived in some colleges for ladies. Nevertheless, this distinction is important from a medical point of view. The social practice, it is true, in many instances shows no more harmful effect than games like 'blind-man's-buff.' But in other cases of not a few women, single and married alike, it becomes according to careful observation, intimately associated with a neurotic state, of which it is first the leading cause and afterwards the morbid solace.

To the subject of reform in foot-clothing Mr. Ellis has brought the earnestness which pervades the book. In this direction considerable progress has been made in modern times; but the combined forces of the surgeon, the artist, and the intelligent craftsman are doubtless needed for the evolution of the best covering. A little superficial knowledge of anatomy is of small avail. The *soi-disant* anatomical bootmaker is too often a workman who keeps in his shop a skeleton foot and a second-hand text-book of anatomy, brings out in *dilettanti* fashion a superficial knowledge of the bones, then some days later sends home a particularly ill-made pair of boots. And the attention which Mr. Ellis has given to the subject has been well bestowed. He urges that the covering should correspond far more accurately than is usual to the contours of the foot. With this view he has himself devised an apparatus which he names the 'Pedistat,' and which is intended to take numerous and precise measurements for the construction of the shoemaker's last.

He usefully insists on the essential fact that the inner aspect of the foot preserves a straight line from the heel to the end of the great toe, and adds his protest against the fashion in boots and stockings that distorts that toe towards the middle line of the foot. Admitting that ugliness has been attributed to boots and shoes of hygienic construction, Mr. Ellis, with a keen interest in the beauty of form, suggests the remedies that are, he believes, required. The bootmaker should abandon the attempt to make the two sides of a single boot approximately correspond. Symmetry is to be obtained, he thinks, by regarding the right and left foot as corresponding and complementary halves of a combined structure. This complementary view of the two feet is strongly insisted on throughout the book, and is connected with special opinions held by the author as to the best methods of standing and walking.

Yet, whilst deprecating the mischievous fashion of producing an artificial appearance of symmetry in the individual foot-covering by crowding up the toes, Mr. Ellis is surely too emphatic when he declares that there is an utter absence of symmetry between the inner and the outer side of the nude foot. In nature and art partial symmetry is a frequently occurring element of beauty. And in the human figure there are, besides the foot, many structures whose beauty in measure depends on partial symmetry, as seen, for instance, in the two lips and in the several aspects presented by the same limb, upper or lower, in its various longitudinal sections and in its digits. But whether symmetry belongs to the feet individually or only in combination, it is in either case questionable whether the design, so attractive in theory, of obtaining a pleasing appearance in the covering chiefly by adapting it more accurately to the nude form is really available in practice. There is a reverent idea common amongst dress-reformers that even if nature cannot be reproduced in full, the largest measure of beauty will be obtained by reproducing her in part—a theory which too often overlooks the fact that after the subtraction from natural form of certain of its features, that which remains may appear as a mere mutilation.

When once the need for clothing is admitted, the effacement of certain elements of beauty is involved and must be reckoned with. A mere coat of paint essentially detracts from the beauty of the sculptor's work, less in regard to its bold outlines, and more in regard to its delicate contours. Now, the marvellous beauty of the undeformed nude foot is surely dependent mainly on its more delicate elements. These might easily furnish the artist with a glowing theme. He might describe the toes as indenting the main structure like pinnacles, themselves parallel, rounded, and set with pearl-like nails, the structure passing on the dorsum and sides of the foot into gentle undulations, and the whole delicately tinted. He would be unlikely to seek beauty in the complementary effect of two opposite feet insisted on by Mr. Ellis, and it is to be feared that he would hold that the mere marginal outline of the feet, either singly or combined, is not an especially pleasing feature.

It appears impossible that the delicate beauty of the foot should not be largely effaced by the needful leather casing, however well it be adapted. And it is to be noted that amongst the abundant and excellent illustrations of Mr. Ellis' book, he does not attempt any figure of boots or shoes constructed on his own principles. It is not surprising if the bootmaker resorts to artificial contrivance. Thus his device of lengthening out the front end of the boot, and then beyond the toes tapering the outline, can hardly be condemned provided that he can be induced to preserve the straight inner line to the extremity of the great toe, to give ample breadth for separation of the toes, and to attempt no narrowing whatever except beyond the toes themselves. A degree of this form is really represented in Mr. Ellis' own diagram of the sole on page 100. The boot is slightly lengthened beyond the foot just as the scabbard may extend beyond the sword.

Amongst the pathological evils of faulty foot coverings the author places not corns and bunions alone, but he adopts the view that the damage commonly inflicted on the first metatarso-phalangeal joint helps to determine gout to the great toe. Reference might well be added to a process which contributes in advancing years to difficulty of walking, and thus indirectly produces serious damage to the health of many aged persons. The crowding up of the toes originated by faulty foot coverings is fixed and aggravated by a process of sclerosis which, whilst affecting organs and tissues of the body in general, contracts the fascia and tendons of the toes. Numerous and characteristic corns form not only on the unnatural angles of the phalangeal joints, but also upon the curved over extremities of nearly all the toes. Thus walking is attended with constant difficulty, and we may transfer to the health of the foot and of the whole body the spirit of the adage, 'For want of a nail ——'

Amongst his minor points, the author maintains the advantage, in regard to the extremities of muscles, of dropping the word 'origin' and applying to both ends the word 'insertion' or 'attachment,' since, according to their different uses, muscles take their fixed point from either end. This appears to be a desirable alteration, but in order to avoid confusion incident to using 'insertion' in a sense different from that established by long usage, the word 'attachment' is preferable. It would indeed be an immense gain to the intelligent use of anatomy if a wise revision of its nomenclature could be agreed upon.

The special features which distinguish the human structure amongst the feet of mammalia are discussed, and here, as elsewhere, sympathetic appreciation of natural processes is evident.

The entire work, although not a large one, justifies a sentence in the preface, 'Not without careful study, over many years extending, has my book been produced.' W. Wilberforce Smith, M.D.

Article 2070.

On the Operation of our Wound-remedies, and upon their Action on the Human Organism. By Dr. Emil Senger. Reprinted from *Langenbeck's Archiv.*

The author proposes the term 'antimycotic,' to signify an agent which destroys fungi and micro-organisms generally, instead of 'antiseptic,' because he maintains that septic changes may be avoided without the employment of antiparasitic agents at all.

He then quotes some researches by Saikowski, who poisoned rabbits by injecting solutions of corrosive sublimate, and found that the kidneys showed large calcareous concretions, consisting of phosphate and carbonate of lime. He also quotes Prévost, who found mercury in the marrow of the bones of animals poisoned by mercurial salts, and showed that the deposition of bone-salts in the kidneys was accompanied by a disappearance of lime-salts from the bones of the affected animals, so that in some cases the epiphyses of the long bones became movable upon the shaft of the bone. The above researches bear date 1882.

In the same year Stadfeldt made an autopsy of a woman who died five days after the injection of a 1 to 1,500 solution of corrosive sublimate into the uterine cavity, in whose kidneys calcareous concretions were found, similar to those observed in rabbits.

Similar fatal cases of sublimate poisoning have been recorded in midwifery practice by Winter, Keller, and Thorn.

The author then describes a series of six experiments in which he injected solutions of corrosive sublimate into mice and rabbits, extirpated the right kidney after the poison was detected in the urine, and submitted the organ to careful examination, comparing the appearances observed with those presented by the left kidney after the death of the animal.

Five milligrammes of HgCl$_2$ produced slight toxic symptoms, whilst 40 to 60 milligrammes was a fatal dose. Albuminuria and very scanty urine were observed in all cases near the end, but no sugar was found in the urine. Macroscopically, the kidneys appeared studded with reddish-grey points, and granular. Microscopically, the glomeruli were found shrunken, often denuded of cells, and with thickened capsules.

The large intestine showed hæmorrhagic patches, swollen mucous membrane, and desquamation of epithelium.

The following case of corrosive-sublimate poisoning in the human subject was observed by the author:—

A woman, aged 25, became slightly feverish three days after her confinement. Next day she had a rigor and high temperature. Commencing puerperal fever was diagnosed, and the uterus was irrigated with 1 litre of a 1 : 1,000 HgCl$_2$ solution.

Shortly after vomiting and diarrhœa set in; later she became maniacal. Bloody fæces and scanty urine, cramps and uræmic symptoms followed, and she died nine days after the injection.

The following appearances were observed at the autopsy:—

Large Intestine.—Discoloured necrosed mucous membrane, detached from the submucous coat in several places.

Small Intestine.—Mucous membrane swollen and hæmorrhagic in many places.

Kidneys.—Large and soft. Cortex pale yellow. Medulla not shrunken. Marked destruction and degeneration of epithelium, especially in the cortex. Entire tracts of convoluted tubes denuded of epithelium. Exudations in the capsules of the glomeruli. Infiltration of small cells in the intertubular connective-tissue. Casts in many of the tubes, in some enclosing much epithelial *débris*, in some little, whilst some are quite hyaline. Epithelium in the straight tubes extremely disintegrated. Calcareous concretions are here found side by side with masses of epithelial *débris*.

The author remarks that these calcareous concretions (Kalkinfarcte), which are quite characteristic of corrosive-sublimate poisoning, may be mistaken for fatty degeneration of the epithelium. They are easily distinguished therefrom by their ready solubility in hydrochloric acid. He also points out that lactic acid has been found in the blood in cases of HgCl$_2$-poisoning, and suggests that this acid may dissolve out lime-salts from the bones, and carry the dissolved calcium lactate to the kidney, where the concretions may be produced during the act of excretion. Experiments with iodoform, carbolic acid, boracic acid, salicylic acid, and common salt are then detailed, which prove that all these 'antimycotics' have distinct poisonous action upon the human organism.

Animals and men poisoned by antimycotics exhibit uræmic symptoms, if death does not follow in 24 hours. Convulsions, cramps, and unconsciousness are present before death.

In many of these cases the kidneys have become degenerated and are functionally incapable. When the symptoms are caused merely by retention of urea, &c., in the blood, the case resembles one of ordinary uræmia, but if, in addition, some of the antimycotic remains in the blood (as the researches of Heineke indicate), a modified uræmia results.

All antimycotics are also blood-poisons and tend to produce degeneration and loss of functional power of the kidneys.

This has a bearing upon renal surgery, for one kidney will be less capable of removing the poison than two, and a diseased kidney less than a healthy one.

Case.—A woman, 25 years of age, had suffered for 2½ years from double hydronephrosis.

Urine turbid, shreddy. Albuminous.

Microscopically showed white blood-corpuscles, and flat epithelium, no tube casts.

Right kidney much enlarged, normal in position, indistinctly fluctuating.

The left kidney was converted into a fluctuating tumour, following the course of the ureter. Palpation revealed fine crepitation in the tumour, so that stone was suspected. A slimy thin fluid exuded on puncture.

March 29, 1887.—Nephrotomy: Iodoform gauze tampon employed, and strict antiseptic precautions. This was followed by coma, suppression of urine, and death on April 2.

The author concludes that every antimycotic is a poison to man. 'If we obtain good results by means of these substances in surgery, we do so with two-edged weapons.' G. STILLINGFLEET JOHNSON.

ARTICLE 2071.

The Medical Handbook of Life Assurance. By J. E. POLLOCK, M.D., F.R.C.P., and JAMES CHISHOLM, Fellow of the Institute of Actuaries. Published by Cassell & Co.

THE object of this book is to give plain instructions for the guidance of medical examiners; to secure as far as possible uniformity in the practice of the various offices, as regards acceptance, rejection, and extra rating of those proposing to insure their lives. It is evident that, however rigid the rules laid down, much must always be left to the judgment of the observing physician. Those who are called upon to report on such proposals will hail the appearance of a concise, clear, and emphatic exposition of the questions involved.

The name of the author is a sufficient guarantee of the solidity and value of his work.

We can only notice in this review a few of the salient features.

First, as to the duties of the medical examiner. It is for him to define the precise features of the case that indicate a blemish in the life, whilst the 'medical adviser' to the company, in conjunction with the actuary, estimates the amount of depreciation and fixes its money equivalent.

The chapter which deals with 'the duties of the medical examiner' and the modes in which he should obtain the information sought should be read and pondered, and offices would do well to distribute the book among their medical representatives.

The importance of obtaining from the friend of the applicant a written statement in the form of a letter, and not on a printed form, is well worthy of attention. The power of forms to frustrate the aim of the sender and to deter those who fill them up from giving the required information is pretty generally acknowledged.

Chapter VI., on heredity, is most valuable, the contrasts between phthisis, syphilis, and insanity being clearly worked out.

The necessity for extra rating where a parent is diabetic or rheumatic, and for refusing if both parents are diabetic or rheumatic, is insisted on.

The space allowed will admit of very few extracts, but here are one or two from the chapter on 'Alcohol.'

'The degenerations of age are anticipated and precipitated by alcohol, and the dram drinker is thus sure to have a shortened life. . . .'

'It is the man who carries his drink well, and is always under its influence, who is in the greatest danger. No value can be attached to the statement that the proposer "was never known to be drunk." Where a suspicion exists which cannot be set aside, we should give the office "the benefit of the doubt." The chief officer should see the proposer. Country agents and even country doctors are apt to be influenced by local considerations and the personal importance of the proposer in his own neighbourhood.'

'Three classes of the intemperate may be distinguished. (1) The dram drinker; (2) the occasional drunkard at special festivities, and (3) the subject of "bouts" of intemperance recurring at long intervals.'

'For none of these classes can we find a place in life assurance; all are among the most dangerous risks, no money compensation can be put against the chances of such a life breaking up suddenly.'

'A man with an injured valve in the heart, a portion of lung diseased, or with albumen in his urine, may outlive all calculations, but an habitual drinker to excess never.'

In the chapter on 'Heart' the caution of the author is shown, perhaps, to excess. He considers 'cases of aortic murmur, systolic, diastolic, or double, are entirely uninsurable, the elements of durability being wanting.' In cases of mitral regurgitant disease he advises that the premiums be paid up for a whole life policy in eight or ten years.

Cases of 'anæmia' are considered not insurable until the anæmic condition has passed off.

The chapter on 'Hæmoptysis,' as might be expected from a physician of the Hospital for Consumption at Brompton, shows large experience, discrimination, and judgment. Slight blood-spitting in early life, where the family history and personal history and habits are good, the age 35 or more, and physical signs of lung and heart disease absent, may be accepted with a moderate addition. Even in earlier life, if every circumstance is favourable, the examiner may be safe in accepting the risk.

The observation of large numbers of cases of phthisis enables us to state that many of them outlive all expectation. If the varieties of that disease were minutely studied, it might be possible to find rules and methods of assurance which should include them.

If space permitted we should like to quote largely from the chapters on 'Albuminuria' and 'Glycosuria,' but these subjects will be fully before the profession at the British Medical Association meeting in August. Some observers find albumen in the urine in half, or more than half, their cases, taken indiscriminately, applying for treatment. A well-known physician at Carlsbad regards the absence of albumen from the urine as pathological. These results are, however, obtained by the use of tests which are too delicate for the clinical physician, and only valuable to the scientist.

Dr. Pollock is severe in almost all cases of epilepsy, obesity, plethora, and even of hysteria. He lays down sound general laws, from which doubtless he would be the first to make exceptions. His table of 'Relative Heights and Weights' is of much practical value. He advises that, as a rule, all persons markedly outside the standard given should be excluded from insurance.

The more strictly technical part of the work, in which Mr. Chisholm's hand is to be traced, gives valuable hints how best to modify the method of assurance in accordance with the character of the risk.

Forms of suggested medical reports are given, which are certainly good, but, like all forms, err in the direction of excess. The medical examiner should never be encouraged to think that, by replying to a long series of questions, he has sufficiently done his duty. The company relies on his judgment to give a general and particular estimate of the case irrespective of, over and above, the replies to the specific questions.

It very often happens that a medical examiner is so engrossed with the form that he has little time or mind left for estimating the real condition of the applicant.

No reference to this book would be at all complete which did not refer to the 'Typical cases,' which occupy the last six pages; these give the reasons which have called for extra rating in 100 cases, selected from the experience of various officers. From these it will be seen that the practice varies greatly—*e.g.* one office adds twenty years to the life at the age of 29 because father and mother had died (at the ages of 34 and 52) of consumption; another proposer of the same age is called upon to pay 'seven years added,' the father having died of consumption at 45; while a third, at 31, is not rated up at all, although his father died of consumption at 38.

The instances of heart disease, of albuminuria, of epilepsy, &c., will interest and guide many. The whole work, although in large print, and occupying scarcely 200 pages, is so concise, terse, definite, and full, that it will be for a long time regarded by the medical profession as the standard authority on all questions relating to life assurance.

E. SYMES THOMPSON, M.D.

ARTICLE 2072.

The Annual of the Universal Medical Sciences for 1889. Edited by DR. CHARLES SAJOUS. Published by F. A. Davis, Philadelphia, New York, and London.

THIS is a marvellous work comprising five volumes of most valuable information; being a yearly report of the progress of the general sanitary sciences throughout the world, and well illustrated with chromo-lithographs, drawings, &c. The work is intended as a book of reference, and each case quoted has the name, date, and number or volume of the journal in which it originally appeared. At the end of the last volume there is a very useful index arranged in three columns. The first is a general index of the various diseases, drugs, places, &c., mentioned in the work, with the number of the volume and page where the article referring to them may be found; in the second column, under the heading of Therapeusis, is given the dose and method of administration of the chief drugs that are recommended for the various diseases in the corresponding column of the general index, and the third column gives the names of the various authors quoted in the text. In the first volume diseases of the Lungs, Heart, Stomach, Intestines, Kidneys, are treated together with the acute specifics. The second volume is devoted to the Brain and Gynæcology. The third is chiefly devoted to Surgery. In the fourth Diseases of the Skin, Eyes, Nose, and Larynx, are gone into, with an article on Legal Medicine and Life Insurance. In the fifth the question of General Therapeutics is very fully entered into, and an interesting article is given on all the new remedies that have been introduced during the last year.

As a work this *Annual* is a marvel of indefatigable labour, and will prove of immense use to all students and practitioners of medicine, while the expense entailed in preparing it must have been enormous. All those, therefore, to whom such a work is useful should at once obtain a copy for themselves, and in this way enable the editor to continue the good work he has begun. RICHARD NEALE, M.D.

ARTICLE 2073.

The Clinical Use of Prisms. By ERNEST E. MADDOX, M B. Hamilton, Adams, & Co. 1889.

WE think that this little book will supply a real want, and direct attention to a subject that is too much neglected. Books on optics hardly touch the subject of prisms at all, except in reference to dispersion, and ophthalmic text-books generally merely mention the simplest facts connected with them. Our author, however, deals with the optical properties of weak prisms (which alone are of clinical use) in as full a manner as is possible without introducing mathematical problems, which he has purposely abstained from doing.

On the whole the arrangement of the matter is clear, although, from the author's extreme parsimony in the expenditure of commas, some of his sentences require reading more than once.

He points out the inaccurate way in which the terms 'apex' and 'base' of a prism are commonly used, but we think that he fails to make it quite clear in what that inaccuracy consists. The confusion has arisen from the fact that for convenience prisms in use in the trial cases are cut circular. In a prism not so cut the base is a plane surface, and the edge, or apex, a straight line. When a circular portion is cut out of the prism, only points on the base and edge are included. If, in speaking of base and apex, only these points are referred to, the expression involves a serious inaccuracy. The terms should, of course, indicate the real base and edge of which these points form a part.

The most useful parts of the book are those dealing with the methods of measuring prisms and testing the centring of lenses, the author's apparatus for these purposes being both ingenious and simple. The tables also showing the amount of decentring of spherical lenses necessary to give a certain prismatic effect will be useful for reference. Why, in a book of this kind, there should not also be an appendix giving a table of logarithmic sines we cannot understand. Throughout the book sines of angles are referred to in a bland sort of way, as if everyone kept such a table handy.

The clinical aspects of the subject are not dealt with nearly so fully as might be expected from the title. It is recommended that when a prism is ordered for a monocular defect it should be placed before the affected eye; when it is required for a conjugate defect the prism should be divided between the two eyes. We find no reason given for this rule, and it seems to us to have no theoretical basis. In speaking of the use of the prism for the discovery of feigned monocular blindness, we are surprised that no reference is made to a fact which might very easily lead to an unfounded accusation—namely, that when a bright light is looked at with one eye through a prism a secondary image is always visible, having an angular displacement, which is about four times the angle of the prism. It is due to reciprocal reflection between the two surfaces of the prism. Of course the use of a coloured glass would at once show whether the two images belonged to different eyes or not.

The writer quotes rather freely the results obtained by Noyes and Stevens, but these require confirmation before they can be laid down as safe guides for treatment. We do not know whether it is a leaning towards American expressions, which leads him to abandon the well-understood and, we should have thought in our innocence, harmless phrase 'naked eye,' and to substitute for it the barbarous expression 'the unclad eye.'

The suggestion that prisms should be marked according to the angular deviation that they cause is an eminently practical one, while the further suggestion that they should be marked in metrical angles certainly is not. For, as the author himself points out, the metrical angle has no constant value, but varies with the distance between the eyes.

Notwithstanding its minor faults, however, the book will be exceedingly useful as an introduction to the subject, and should be considered as necessary to the student as a treatise on optics.

W. ADAMS FROST.

NOTES ON BOOKS.

ARTICLE 2074.

Middlesex Hospital Reports. 1887. H. K. Lewis.

THESE reports, compiled by the Medical, Surgical, and Pathological Registrars, contain, among other reports, most valuable analyses of the history and correlated morbid conditions observed in the cases of cancer of the lip, tongue, rectum, &c., which were in the hospital during the years 1882–87. The labour would be but slightly increased, and the value of the reports enormously greater if the microscopical nature of all the malignant growths were included.

Of 118 cases of cancer of the tongue and mouth, 11 occurred in women; the earliest age at which the disease was first noticed was 25½ years; and out of 29 cases in which the disease was removed, 13 survived six to eighteen months. The cases in which the tongue was removed by the wire écraseur were the ones most liable to septicæmia. Out of 51 necropsies secondary deposits occurred only in 6.

Of 38 cases of cancer of the lip 2 were in women. The earliest age at which the disease was first noticed was 26; three years was the average period which the patient survived the removal of the growth. Out of 9 necropsies secondary deposits were found in 2 cases.

Of 51 cases of cancer of the rectum 27 were in women. The earliest age at which symptoms of the disease were first noticed was 22 years. The average period after colotomy before death, was eighteen months in men, and thirty-two months in women. There were secondary deposits in 12 out of 25 cases.

The Pathological Registrar contributes the abstracts of over 200 *post-mortems*, which include much valuable information. Over one-third of the reports are those of malignant disease.

G. N. PITT, M.D.

ARTICLE 2075.

Lectures on Nervous Diseases. By A. L. RANNEY, M.D. Philadelphia: Davis & Co. 1888.

THESE lectures are mainly in the form of tabular statements of the leading facts culled from the various text-books on nervous diseases. There is but little that is original, and they are illustrated by nearly 200 rough diagrams and sketches, which, for the most part, are borrowed from current works.

The first hundred pages are devoted to a summary of the cerebro-spinal architecture, and the course of the various fibres is readily understood with the assistance of the numerous coloured diagrams. Older works on anatomy invariably attempted to include too many details in each illustrated plate, and added to the obscurity by excessive shading. The great value to students of numerous outline diagrams, each illustrating but one set of facts, is now generally appreciated. Such diagrams form a prominent feature in this work.

The second section of the book gives a long, but imperfect, account of the methods of examining patients. Thirty pages are devoted to the examination of the eye, but only seven lines are given to ophthalmoscopic appearances, while the methods of testing the fields of vision and colour-vision are entirely omitted.

The author, in discussing functional nervous diseases, including epilepsy and chorea, considers that they frequently depend on reflex disturbance, and that in the majority of cases treatment of the errors of refraction and of ocular muscular defects will be sufficient to effect a cure. Cases are recorded by Dr. Ranney in which severe epilepsy and chorea were cured by dividing one or more of the ocular tendons. This appears to be his favourite treatment for all such disorders.

The last portion of the work is occupied with a full discussion of the various methods of applying electrical treatment.

The book, which is founded on courses of lectures, contains very many tables, of more or less usefulness, consisting of dogmatic statements; but for accuracy and completeness it is far behind all our best English text-books. G. N. PITT, M.D.

ARTICLE 2076.

On the History and Statistics of Small-pox and Protective Vaccinations in Hesse. By DR. REISSNER. Darmstadt: H. Brill. 1888.

THIS posthumous work of Dr. Reissner, who did so much to introduce animal vaccination, deserves careful consideration, as being of more than local interest. The various appearances of small-pox in Hesse from 1805 to 1883 and the course of vaccination from 1807 to 1881 are given in detail. Dr. Neidhart (Dr. Reissner's successor) contributes an interesting supplementary chapter.

E. J. EDWARDES, M.D.

ARTICLE 2077.

Transactions of the Obstetrical Society of London, Vol. xxxi., for the year 1889, Part II. for March. April, and May. Edited by PERCY BOULTON, M.D., Senior Secretary, and F. H. CHAMPNEYS, M.D. London: Published by the Society, at their Library, 54 Berners Street, W. 1889.

THIS instalment of the *Transactions* for the current year includes the President's (Dr. Galabin) inaugural address, which contains some instructive observations on Cæsarean section, operations for extra-uterine gestation, and the nature of puerperal fever. Dr. W. Stephenson's paper 'On the Relation between Chlorosis and Menstruation: an Analysis of 232 Cases,' will interest physiologists and practitioners. The other papers contained in this issue of the *Transactions* are by Dr. Champneys ('Case of Cæsarean Section for Contracted Pelvis'), Dr. W. Newman ('Case of Inversion of the Uterus, sixteen months' standing; Replacement; Recovery'), and Dr. Y. Phillips ('On Acute Non-Septic Pulmonary Disorders, as Complications of the Puerperium'). Amongst notes on specimens of interest we turn attention to Dr. Playfair's 'Intraperitoneal Hæmatocele' and to a report on the preparation which he exhibited. The specimen throws some light on the pathology of hæmatosalpinx.

ALBAN DORAN.

GOSSIP.

Death of Professor Loreta.

THE eminent man who was recognised as the leading operator in Italy and one of the foremost practical surgeons of the day died at Bologna on July 23 by his own hand. This melancholy termination to a brilliant career has caused a most painful sensation to his professional brethren in his own country, where he was universally honoured as a practitioner and both revered and beloved as a teacher. Loreta, whose hereditary title of Count was lost in the greater dignity of his professional designation, was born of a noble family at Ravenna in 1831. Both his preliminary and his strictly medical studies were pursued at Bologna. They were interrupted for a time when he took an active part in the revolutionary movement of 1848, and it was 1858 before he took his degree. The years from 1858 to 1861 were spent in an obscure country practice; but in the latter year he was called to Bologna as head of the anatomical laboratory, and in 1865 he succeeded Rizzoli in the chair of clinical surgery. In spite of the intense activity of his professional life, Loreta found time for politics; he was an ardent Liberal, and some months before his death had been returned to the Italian Parliament by an immense majority of his fellow-citizens. He is best known, perhaps, by his operation for the relief of stricture of the pylorus, and by his method of dilating œsophageal stenosis from below through the cardiac orifice; but his operative work covered the whole field of practical surgery. He was the first to resect the liver, and it is only a few months ago that a memorial tablet commemorating that achievement was placed in the hall of the University of Bologna. His published works include papers on a new method of perineal cystotomy, a new method of treating aneurysm, remote effects of contusions of the head, and many others. Bologna honoured the deceased surgeon with a public funeral.

The College of Surgeons and its Library.

SOME interesting particulars as to the Library of the Royal College of Surgeons are given by Mr. J. B. Bailey, the present librarian, in an article which occupies the place of honour in the August number of *The Library*. When the surgeons were freed in 1745 from their ignoble association with the barbers there was a good library of surgical books and many old surgical manuscripts. This library was retained by the barbers who, in 1747, offered it to the surgeons for twenty-five guineas. The latter, however, on the plea that the books belonged to them by right, refused to purchase, and the books were accordingly sold to a bookseller for £13. This curious collection of books, many of which had bosses and chains attached to them to prevent too enthusiastic votaries of science from 'conveying' them to their own libraries, was thus scattered. The present library dates from 1800, the year of the charter of incorporation. John Hunter, whose name is so imperishably connected with the magnificent Museum of the College, may also be called the founder of the Library. In a letter to the Corporation, dated Aug. 14, 1786, after calling attention to the discreditable fact that the surgeons of London had no public surgical library, he suggests that every member should present his own works, so that the nucleus of a suitable collection might be formed. By way of showing an example, he himself offers 'the few observations on anatomy and surgery' which he had published. The progress of the library was, however, very slow, and it was not till 1829 that the first librarian was appointed. In 1834 the library contained 18,000 volumes. Soon afterwards the College was rebuilt, and the library was reopened in 1837 with greatly increased accommodation. The recent legacy of Sir Erasmus Wilson has enabled the college still further to enlarge the space for the arrangement of books. At present the books number 40,000, but this number would be greatly increased if dissertations and pamphlets, several of which are bound up in the same volume, were, as was previously the case, counted as separate works. The number of scientific periodicals, regularly taken by the library, amounts to 360, a somewhat overwhelming proof of the activity of medical workers at the present day. Several catalogues of the library have from time to time been made, but none of them was completely satisfactory for the purposes of those engaged in literary research. It is pleasing, therefore, to learn that Mr. Bailey is engaged in compiling a new one, which is expressly designed to save the time and patience of those who have occasion to refer to it.

Male nurses.

AS those engaged in extensive general practice know, it is not always an easy matter to get a male nurse when one is wanted. It must be owned also that the demand for them is not so great as it would be if the bulk of the profession had much confidence in their efficiency, and more particularly in their sobriety. Still every now and then a medical practitioner may be asked to recommend a male nurse, and it would save a good deal of embarrassment if it were more generally known where to find one when necessary. The Hamilton Association for Providing Trained Male Nurses, 57 Park Street, Grosvenor Square, W., seems to meet this want in a satisfactory manner. From the fourth annual report it appears that the Association supplies male nurses to St. George's, Guy's, and the Seamen's Hospitals. During the past year men have also been supplied to the Westminster Hospital and to the Hospital for the Paralysed and Epileptic, Queen Square. In private practice, one hundred and thirty-three engagements were completed during the year. In only nine of these was dissatisfaction expressed with the attendant, on the ground either of competence or of conduct. Arrangements have been made with one of the metropolitan hospitals for the training of male nurses. With so good a record of work, it is somewhat surprising to learn that the Association is not yet self-supporting.

Medical congresses in Italy.

THE thirteenth Congress of the Italian Medical Association will be held at Padua from Sept. 22 to 27. Most of the medical notabilities in Italy having promised to take part in the proceedings, it is expected that the meeting will be brilliantly successful. The following gentlemen form the Directing Committee:—*President*: Dr. A. De Giovanni, Professor of Clinical Medicine. *Vice-Presidents*: Drs. E. Bassini, Professor of Operative Surgery, and N. D'Ancona, Chief Physician to the Civil Hospital of Padua. *Secretaries*: Drs. A. Breda, Professor of Clinical Dermato-Syphilography, and B. Luzzatto, Professor of Children's Diseases. *Vice-Secretaries*: Drs. G. Alessio, and A. Borgherini. *Treasurer*: Dr. B. Panizza, Professor of Hygiene. A Congress will shortly be held at Ancona to discuss the subjects of typhoid fever and tuberculosis, with special reference to the district known as Le Marche

(The Marches). The following are the special questions proposed for consideration. 1. Typhoid infection in its various forms. ; 2. Tuberculosis in the Marches; 3. The best system of drainage to be recommended in the centres of population of the four provinces comprised in that district. The Seventh International Pharmaceutical Congress will be held at Milan in the beginning of September 1890. The Sixth Congress of the Società Freniatrica Italiana (Italian Medico-Psychological Society) will take place at Novara in September of this year. The following questions proposed at the last meeting of the Society at Siena in 1886 will be discussed:—Differential Diagnosis of Degenerative Conditions; Diagnosis of Feigned Insanity; Psychology in its Relation to Recent Anatomical and Physiological Views; the Applications of 'Suggestion' in the Treatment of Mental Disease, with special reference to the following points—*a*, whether it is possible to establish on a serious basis a system of therapeutic suggestion in the treatment of insanity; *b*, whether such a system could be carried out only by means of hypnotism, or apart from that; *c*, what should be the methods, limits, indications, precautions, &c., in the employment of such a mode of treatment.

Prophylaxis of tuberculosis.

A COMMUNICATION from the Permanent Committee of the *Congrès de la Tuberculose* was presented to the *Académie de Médecine* at its meeting on July 30, of which the following is a summary. Tuberculosis is, of all diseases, the one most destructive to life in cities and in certain country districts. In 1884, of 56,970 deaths which occurred in Paris, 15,000—that is to say, more than a fourth—were due to tuberculosis. Pulmonary phthisis is far from being the only disease due to tuberculosis. Tuberculosis is certainly contagious, and is caused by the entrance into the organism of Koch's bacillus. That microbe may gain admission not only by the lungs but by the alimentary canal, and the skin when broken, as by stings, scratches, wounds, ulcers, &c. Certain diseases act as predisposing causes of tuberculosis; such are measles, small-pox, chronic bronchitis, pneumonia, diabetes, alcoholism, and syphilis. The generating parasite is found in milk, and in the flesh and blood of animals used for food (ox, cow, rabbit, fowl). Raw or underdone meat and blood should be forbidden as food. Milk should always be boiled. A tuberculous mother should not suckle her child. If a healthy wet-nurse cannot be procured, and cow's milk is given, it should always be boiled. Unboiled ass's or goat's milk is much less dangerous than unboiled cow's milk. The inspection of meat should be rigorously enforced, and the public should co-operate with the authorities to that end. Meat is absolutely safe only when thoroughly well cooked. The sputum being the most common vehicle of infection, spittoons should be in universal use; they should be emptied into the fire, and should be cleaned with boiling water. No one, and more particularly no child, should sleep in the bed of a person suffering from tuberculosis, or even be much in the room occupied by them. Things that have been used by phthisical patients should never be used by other persons without previous disinfection. In the case of those predisposed to the disease, special care should be taken to avoid contagion.

Medical Officers in the Turkish Army.

WE are accustomed to a good deal of grumbling from the surgeons in our own army, and no one who knows the facts can say that their somewhat monotonous complaints are without foundation. The grievances of English army doctors, however, are trifles light as air compared with those of their Turkish congeners. It is stated on what appears to be good authority that the Ottoman Government is replacing medical officers who have grown old in the service by new-fledged youngsters from the Imperial schools at Constantinople. Surgeons and apothecaries of thirty and forty years' service whose diploma comes from any other college or university are discharged without pension or retiring allowance, and without even the return of the 5 per cent. deduction from their pay which has been made for the purpose of creating the necessary fund. Many of these unhappy officers who, in the hope of advancement, have submitted to the conditions imposed by the Turkish Government, and have become naturalised for the purpose, have never been promoted from the rank first conferred on them. Even this meagre portion is now to be taken from them. Strenuous efforts are being made by the victims of this gross injustice to bring their case to the personal knowledge of the Sultan, and it is to be hoped that his Majesty will look into the matter for himself and prevent the doing of so great a wrong.

Dangers of the suspension treatment.

ANOTHER case of death has occurred from the suspension treatment of locomotor ataxy—this time from Italy. The case, which occurred in the clinique of Professor E. Galvagni, of Modena, is fully reported by Dr. Carlo Borsari in the *Riforma Medica* of July 18 and 19.

Medical Congress in Brazil.

THE second Brazilian Congress of Medicine and Surgery will be held at Rio de Janeiro in September, beginning on the 15th. The meeting will be presided over by Dr. Hilario de Gouvêa. Among the subjects down for discussion we note the following:—'The Best Means of Preventing or Mitigating the Epidemics which frequently prevail at Rio and in other parts of Brazil;' 'The Nature, Cause, and Treatment of Beri-beri;' 'Prophylaxis and Treatment of Yellow Fever;' 'Prophylaxis and Treatment of Tuberculosis;' 'Geographical Distribution, Symptomatology, Nature, and Treatment of the Acute Spasm of the Œsophagus, which is endemic in certain parts of Brazil.' In the Obstetrical and Gynæcological Section, among the subjects proposed are:—'Ulcerations of the Cervix, their relative frequency in Brazil;' 'Infantile Syphilis in Brazil,' &c. Among the surgical subjects are:—'The Results of Plastic Operations in Brazil;' 'The Nature of Ainhum:' 'Elephantiasis Arabum in Brazil,' &c. In the other Sections such questions are proposed as 'The Nature and Prophylaxis of Leprosy, with especial reference to the disease as seen in Brazil;' 'The Mineral Waters of Brazil;' 'Brazilian Plants used in Pharmacy,' &c. It will be seen from this that 'local colour' will not be wanting in the proceedings of the Congress at Rio de Janeiro.

Bacteriology of drinking water.

THE Gesellschaft der Wissenschaft of Haarlem offers a prize for the best essay on the following subject:—'A Critical Survey, based on Detailed Investigations, of the Species of Bacteria contained in Drinking Water before and after its Filtration through Sand, and of the Methods by which they can be recognised.' The essays, which must be written in Roman characters in German, French, or Dutch, must be sent to the secretary of the society, Professor J. Bosscha, at Haarlem, on or before Jan. 1, 1890. The prize will be, at the option of the author, a gold medal or a sum of 150 Dutch gulden. A second prize of 150 gulden will be given if any other essay is judged worthy of such a distinction.

THE grievances of general practitioners in respect to out-patient departments in hospitals and dispensaries are familiar to readers of the medical journals. We hear much about these grievances now, owing to certain investigations which have made known definite 'abuse rates.' Sir Andrew Clark and others do not believe in the existence of any abuse. No doubt a large proportion of hospital out-patients receive efficient relief, and form clinical material most valuable to the student. Sifting and selecting is very difficult, for the out-patient medical officer cannot undertake the task, and patients look upon inquiries by porters, stewards, and non-medical officers of a hospital as impertinences. On the other hand, practitioners have demonstrated glaring evils in the treatment of certain classes of out-patient. The prescription of a bottle of medicine for an acute or subacute disease in an infant only seen once a week in the out-patient department is most objectionable. If the medical officer says to the child's mother that should the patient be taken very ill between visits a local practitioner must be called in, that officer is acting rightly in one respect, yet he is dividing responsibility in a questionable manner. Any case likely to require daily attention should be left to the practitioner or relegated to the surgery where it can be attended to daily. There can hardly be any difference of opinion on this matter; but every other familiar question in relation to out-patients must remain the subject of much debate even between medical men of the same type.

Last month the Prince of Wales showed the interest which he takes in hospitals by attending two functions at institutions of that kind within the same day, Wednesday, July 24. In the afternoon he laid the memorial stone of the new Samaritan Free Hospital buildings, in the Marylebone Road. In the evening he presided at the Anniversary Dinner of St. Bartholomew's Hospital.

No more will 53 Berners Street, Oxford Street, remain the place of meeting for the four high-class medical societies which have carried on their labours there for so many years. The Royal Medical and Chirurgical Society will move, after the vacation, to No. 20 Hanover Square, and will be accompanied by the Obstetrical, Pathological, and Clinical Societies. The 'Medico-Chirurgical' moved to Berners Street in 1835. The Pathological and Clinical, which both started elsewhere, moved to the Berners Street rooms, the former in 1857, the latter in 1870. The Obstetrical is the only native of Berners Street, as its first meeting was held in the 'Medico-Chirurgical' rooms in 1859. Fate destined that it should be the last of the four societies to meet in Berners Street. Its July meeting, Wednesday, July 3, was held after the other societies had terminated their meetings for the past session. The last business transacted in the Berners Street rooms was the reading of, and discussion on, a paper on 'Chorea in Pregnancy,' by Dr. Montagu Handfield Jones.

At the quarterly meeting of the Council of the Royal College of Surgeons, held on July 11, Mr. Jonathan Hutchinson was elected President, and Messrs. Bryant and Croft Vice-Presidents, for the ensuing year. Thus Mr. Savory's long term of office, for he was elected President in 1885, and has been re-elected yearly, has come to an end. Mr. Jonathan Hutchinson is a thoroughly representative English surgeon. The Vice-Presidents are men of mark. They represent, in an extreme degree, the London medical school interest and policy. The other members of Council stand as follows, the date representing either their *first* or their *only* year of election, as the case may be :—Sir Spencer Wells (1871, President, 1882); Mr. Marshall (1873, President, 1883); Mr. Savory (President, 1885–88, elected 1877); Mr. Lund (1878); Mr. Power (1879); Mr. Cadge (1880); Mr. T. Smith (1880); Mr. Hulke (1881); Mr. Heath (1881); Mr. Sidney Jones (1883); Sir W. Mac Cormac (1883); Mr. Lawson (1884); Mr. Berkeley Hill (1884); Mr. Durham (1884); Mr. Macnamara (1885); Mr. Pemberton (1885); Mr. Sibley (1886); Mr. R. Harrison (1886); Mr. Willett (1887); Mr. Pick (1888); and Mr. Howse (1889). The President was first elected in 1879, and re-elected in 1887; Mr. Bryant was re-elected last year; Mr. Croft was elected in 1882. The great preponderance of London school representatives can be seen at a glance.

At a recent meeting of the New York County Medical Association Dr. John Shrady read a paper on 'Signs of the Moribund Condition,' in which he brought out a number of interesting points. He laid considerable stress upon prognosis, as being a much neglected study, even though to the patient it was of paramount importance, as involving many questions of individual, legal, and social importance. The dying state, he said, could never be arrested. Once begun, it could end only in one way. His conclusions were that, in general, the most trustworthy signs of death are those that appeal to the eye; that among these the respiratory function holds the first rank, both in cases of coma and asthenia, and especially where the two modes of death are combined; that the death by coma has a more extended period of duration; that the most valuable sign of inevitable dissolution is the up-and-down movement of the *pomum Adami*; that temperature changes deserve attention particularly when the curves are sharp, high, and continuous; that intermittent pulse is an early sign of death, particularly when not due to any disturbed action of the nervous system; and that deaths from syncope are too sudden to admit of much observation or study.

Dr. Lyon, the analyst to the Government of Bombay, in his last annual report has much to say on the use of poison in India. This seems to be on the increase, for while he had to deal with 360 of these cases last year, he had only 282 the year before, and the general work of analysis had increased fivefold since the first report was issued in 1872. Part of this enormous increase is due to the increase in the criminal use of poisons, and it is noticeable that vegetable poisons, which were most generally in use a few years ago, are now giving way to metallic poisons. This is attributable to the ease with which such drugs, such as arsenic, may now be obtained in India, there being practically no restriction on their sale. In 84 undoubted cases of human poisoning in the year, arsenic was used in 41, pounded glass in three, copper in six, mercury in five, and red lead in three. Of the remaining 27 cases opium was used in 15, datura in five, alcohol in two, prussic acid in one, and oleander and other plants for the remainder. In a large number of cases the poisoner is never discovered; a family sits down to rice which they have themselves carefully washed; all are taken ill and one dies; arsenious oxide in large quantities is discovered in the dish, but the murderer is never discovered. Many cases of a similar character are quoted by Dr. Lyon. Flour is found in many cases to be adulterated with an enormous amount of arsenious oxide. Poisoning by powdered glass is comparatively new in India; there were only three cases during the year. In one a man threw a packet of pounded glass into a rice mill; in another a woman pounded her coloured glass bangles and mixed the powder with the grain she was grinding for her husband's food. In many cases the poisons are traced to village sorcerers, who always appear to have large quantities, their chief stocks being composed of the bases of powerful alkaloids, of opium, datura, plumbago root, and various mercurial compounds. Through these men poisons are easily procured, and the instances quoted by Dr. Lyon show that poisoning is a very common crime in India on account of these facilities, and that it is also one most difficult to discover.

LITERARY INTELLIGENCE.

An important work on Cardiac Hypertrophy has recently been published by Professor Fraentzel, of Berlin. It is the completest monograph on the subject in existence.—Medical visitors to Paris will find the *Guide Médical de Paris*, recently published by the management of the *Semaine Médicale* a valuable guide in their pilgrimages to the various scientific shrines at which they may with advantage pay their devotions. Foreign medical men are also invited to call at the office of the *Progrès Médical* for any information they may require while the Exhibition is open.—The Proceedings of the Seventh German Congress of Internal Medicine have lately been published under the editorship of Professor Leyden and Dr. E. Pfeiffer. The work, which is published by Bergmann, of Wiesbaden, is in one volume of 476 pages and contains much valuable matter, notably the essays of Leichtenstern and Curschmann on Ileus, and of Ebstein and Pfeiffer on the nature and treatment of Gout (*see* p. 310). The subjects proposed for the next Congress are the following: Dropsy and its Treatment; Treatment of Empyema; Treatment of Angina Pectoris; Tabes Dorsalis.—A new medical paper in the Portuguese language has appeared in Brazil. It is entitled the *Revista Medica de S. Paulo*, and the second number which is now before us gives abundant signs of literary vitality.

The London Medical Recorder.

GREAT BRITAIN AND IRELAND.

MEDICAL QUALIFICATIONS.

THE number of examining bodies in the United Kingdom which grant degrees and diplomas is twenty. The qualifications obtainable from them are as follows :—

1. *Royal College of Physicians of London :* Diplomas of Licentiate, Member, and Fellow.

2. *Royal College of Surgeons of England :* Diplomas of Member and Fellow.

3. *Apothecaries' Society of London :* Licence.

4. *University of Oxford :* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.

5. *University of Cambridge :* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.

6. *University of London :* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.

7. *University of Durham :* Licences in Medicine and in Surgery ; Degrees of Bachelor in Medicine, and Doctor in Medicine, Bachelor in Surgery, and Master in Surgery.

8. *Victoria University :* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master of Surgery.

9. *Royal College of Physicians of Edinburgh :* Diplomas of Licentiate, Member, and Fellow.

10. *Royal College of Surgeons of Edinburgh :* Diplomas of Licentiate and Fellow.

11. *Faculty of Physicians and Surgeons of Glasgow :* Diplomas of Licentiate and Fellow.

12. *University of Aberdeen :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.

13. *University of Edinburgh :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.

14. *University of Glasgow :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.

15. *University of St. Andrews :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.

16. *King and Queen's College of Physicians in Ireland :* Diplomas of Licentiate, Member, and Fellow, and Licentiate in Midwifery.

17. *Royal College of Surgeons of Ireland :* Diplomas of Licentiate and Fellow ; and Diploma in Midwifery.

18. *Apothecaries' Hall of Ireland :* Licence.

19. *University of Dublin :* Diplomas in Medicine, Surgery, and Obstetric Science ; Degrees of Bachelor in Medicine, Doctor in Medicine, Bachelor in Surgery, and Master in Surgery, Bachelor in Obstetric Science and Master in Obstetric Science.

20. *Royal University of Ireland :* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor in Surgery, Master in Surgery, Bachelor of Obstetrics, and Master of Obstetrics.

The Royal College of Physicians of London and the Royal College of Surgeons of England have instituted a conjoint examination for the conferring of the Licence of the former and the Membership of the latter body.

The Apothecaries' Society of London now confers a licence which constitutes a complete qualification in medicine, surgery, and midwifery.

The Royal Colleges of Physicians and Surgeons in Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow, have also instituted a conjoint examination for the conferring of licences.

The King and Queen's College of Physicians in Ireland, and the Royal College of Surgeons of Ireland, have also instituted a conjoint examination.

The Apothecaries' Hall, Dublin, has also instituted a conjoint examination with the Royal College of Surgeons of Ireland.

The Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists' Act.

Certificates and diplomas in State Medicine and Public Health (which are registrable under the Medical Act of 1886) are conferred after examination by the Universities of Oxford, Cambridge, London, Durham, Edinburgh, Glasgow, Aberdeen, and Dublin ; by the Royal University of Ireland ; by the Royal Colleges of Physicians and Surgeons in London ; by the Royal College of Physicians of Edinburgh ; by the Faculty of Physicians and Surgeons of Glasgow ; and by the King and Queen's College of Physicians in Ireland.

The Royal University of Ireland confers a special diploma in mental science. A special certificate in Psychological Medicine is also given by the Medico-Psychological Association.

The following is a general summary of the conditions required on the part of candidates for examination ; but, for further details, our readers must consult the regulations issued in the Students' numbers of our medical contemporaries ; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council ; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised :—1. The possession of a degree in Arts of a University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council ; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the 'Recommendations of the General Medical Council.' No person is allowed to be registered as a medical student unless he shall have previously passed (at one or more examinations) a preliminary examination in the following subjects of general education : 1. English Language, including Grammar and Composition ; 2. Latin, including Grammar, Translation from specified authors, and Translations of easy passages not taken from such authors ; 3. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal

Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same; 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics; 5. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Zoology; (*i*) Elementary Chemistry. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Every person desirous of being registered as a medical student must apply to the branch registrar of the division of the United Kingdom in which he is residing, according to a form which may be had on application to the several qualifying bodies, medical schools, and hospitals, and must produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and *evidence that he has commenced medical study*.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The course of professional study must occupy forty-five months, of which at least three winter and two summer sessions must be passed at a recognised medical school or schools. For the degrees of the Universities (except those of London and the Royal University in Ireland) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a college in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed. These must include the following subjects: Chemistry (including the principles of the science and the details which bear on the study of Medicine, and the rudiments of Heat, Light, and Electricity); Anatomy; Physiology; Materia Medica and Pharmacy; Pathology; Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); Surgery (including Surgical Anatomy and Clinical Surgery); Midwifery (including Diseases peculiar to Women and to New-born children); Theory and Practice of Vaccination; Forensic Medicine; Hygiene; and Mental Diseases.

Special arrangements exist at the Universities of Durham and St. Andrews for granting degrees to practitioners of medicine above forty years of age.

INSTRUCTION IN THE MEDICAL SCHOOLS.

THE medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the College of Medicine of the University of Durham, at Newcastle-on-Tyne; the Medical School affiliated to University College, Bristol; the Medical Faculty of University College, Liverpool (Royal Infirmary School of Medicine); the medical school in connection with the Yorkshire College at Leeds, and that attached to the Firth College in Sheffield. Instruction in all the subjects of the Intermediate in Science and Preliminary Science (1st M.B.) Examination of the University of London is given in the University College of South Wales and Monmouthshire at Cardiff. The University of Cambridge possesses a fully equipped and flourishing medical school, whilst the Medical Faculty of Oxford has had new life infused into it, and provision is now made for the adequate teaching of human anatomy and the other subjects required for the first B.M. examination. Tutorial Instruction and Demonstrations are also given at the Radcliffe Infirmary in Special Regional Anatomy (medical and surgical), methods of Medical Diagnosis and Surgical Manipulation. Practical Pharmacy is taught in the Infirmary and Dispensary. Clinical instruction is given during every term by the Lichfield Lecturers in Clinical Medicine and Surgery. The following hospitals are also recognised by the Royal College of Surgeons for the purpose of professional education:—Bath United Hospital; Bedford General Infirmary; Berkshire Royal Hospital, Reading; Bradford Infirmary; Addenbrooke's Hospital, Cambridge; Derbyshire General Infirmary; Devon and Exeter Hospital; Gloucester General Infirmary; Hants County Hospital; Hull Infirmary; Kent and Canterbury Hospital; Leicester Infirmary; Liverpool Northern Hospital and Royal Southern Hospital; Norfolk and Norwich Hospital; Northampton General Infirmary; Nottingham General Hospital; Radcliffe Infirmary, Oxford; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Sussex County Hospital; Worcester Infirmary.

In Scotland, the medical schools in which a complete course of professional education is given are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow; the School of Medicine in Edinburgh; and Anderson's College, St. Mungo's College and Glasgow Royal Infirmary, and the Western School of Medicine, in Glasgow.

In Ireland, the chief medical schools are, the School of Physic in Ireland, the School of Surgery of the Royal College of Surgeons in Ireland, and the Queen's Colleges at Belfast, Cork, and Galway. There are also several medical schools in Dublin: viz., the Carmichael College of Medicine and Surgery, the Catholic University, and the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction; Practical Surgery; Special Departments; Practical Physiology; Hospital Appointments; Tutorial Instruction; and Scholarships, Exhibitions, and Prizes.

Clinical Instruction.—At all the hospitals connected with medical schools, the physicians and surgeons deliver at stated intervals lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is also made by the appointment of one or more of the hospital staff as clinical professors or lecturers; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, detached wards containing forty patients are set aside for the purpose of instruction in clinical medicine, and are visited and their cases lectured on by the physicians in the winter, and by the assistant physicians in the summer session: the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards are devoted to the express purpose of teaching clinical medicine; the cases being lectured on by the physicians in the winter, and by the physicians or assistant physicians in the summer. Special clinical professorships in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical surgery is Sir Joseph Lister. In University College Hospital there are two special chairs, known as the 'Holme Professorships' of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Sydney Ringer, who delivers clinical lectures twice a week, and trains the pupils in the practical study of disease. Lectures are also given by Dr. Bastian, Dr. Roberts, and Dr. Poore. Dr. Barlow, Assistant Professor of Clinical Medicine, instructs in Physical Examination, in the Diagnosis of Diseases of the Heart and Blood-vessels and of Abdominal Diseases. Dr. A. Money instructs in the Examination of the Lungs and of the Urine. Lectures are given every Monday at 2 P.M. by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Berkeley Hill and Mr. Beck. The Holme Professor holds a clinical examination every Friday at 3 P.M. Mr. Barker and Mr. Godlee, Assistant Professors of Clinical Surgery, hold examinations and instruct students in the observation and examination of patients. At the London Hospital lectures on Clinical Medicine will be given during the winter and summer sessions by Sir Andrew Clark, and on Clinical Surgery by Mr. Jonathan Hutchinson. At Guy's Hospital Mr. Symonds and Mr. Lane give a course of demonstrations on Practical Surgery during the three months previous to each Final Examination of the Conjoint Board. A special course of lectures on clinical surgery is given in St. Thomas's Hospital, the lecturer being Mr. John Croft. At St. George's Hospital, Mr. Timothy Holmes, the Hunterian Professor of Clinical Surgery, will deliver a course of lectures during the ensuing session. At Cambridge, clinical instruction in medicine and surgery is given in Addenbrooke's Hospital throughout the year. At Leeds, clinical lectures are delivered by the Physicians and Surgeons, and classes meet in the wards for practical instruction. In the Liverpool Royal Infirmary, practical instruction in medicine and surgery is given by the respective professors during the winter session. Clinical lectures are delivered weekly, and medical and surgical tutors attend in the wards daily from 10 to 12. At the Manchester Royal Infirmary clinical instruction is given by the Physicians and Surgeons. Clinical classes are formed in October, January, and May; also advanced Clinical Classes for students of the last two years. In the Infirmaries of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medicine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, a course of practical medicine is given by Dr. F. Willcocks and Dr. H. M. Murray. It includes the methods of examining organs, the examination of morbid products, case-taking, &c. At St. George's Hospital, a similar course is given by Dr. Whipham; at Guy's Hospital, by Dr. E. W. Goodall; and at the Middlesex Hospital, by Dr. Coupland. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision for practical clinical teaching made at University College Hospital has been referred to above. At the Manchester Royal Infirmary medical and surgical demonstrations are given, each at 9.15 A.M., once weekly during the summer. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by Dr. Murdoch Brown, and one of clinical surgery by Dr. Carmichael, under the superintendence of the Clinical Professors. There are also classes of Practical Surgery, conducted under the superintendence of Professor Chiene and Dr. Wallace, by Drs. Edington and Stiles, and a tutorial class of Practical Physiology by Dr. R. W. Philip.

Practical Surgery.—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in several instances given in the summer session. In the Liverpool School of Medicine, the lectures on Systematic Surgery are given thrice weekly, and there is a concurrent course of Practical Surgery twice weekly; besides which, a course of Operative Surgery is given in the summer.

Special Departments.—Due provision is made for both theoretical and practical instruction in *Midwifery and Diseases of Women*, so as to enable students to meet the requirements of the examining bodies.

Ophthalmic Surgery is taught both systematically and clinically by observation of cases at all the

London schools: each hospital receiving cases of eye disease except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 36 beds (also about 3,000 out-patients); London Hospital, 12 beds. The other hospitals have beds for ophthalmic cases, but the number is not stated. Provision for teaching ophthalmic surgery, theoretical and practical, is made in the provincial schools. In the Universities of Aberdeen, Edinburgh, and Glasgow, instruction in ophthalmic surgery is given; and the students are admitted to the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in the Schools of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland, provision is made for the teaching of ophthalmic surgery in most of the medical schools.

Aural Surgery is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Bristol, Manchester, and Newcastle Royal Infirmaries among the provincial schools; also at Aberdeen by Dr. McKenzie Booth; at Edinburgh, by Dr. P. McBride in the Royal Infirmary, and by Dr. Kirk Duncanson in the School of Medicine; and at Glasgow, in Anderson's College, by Dr. Barr; in St. Mungo's College by Dr. Johnston Macfie; and in the Western Infirmary School of Medicine by Dr. Walker-Downie.

Diseases of the Throat.—Special instruction in the use of the laryngoscope, and in the diagnosis and treatment of diseases of the throat and larynx, is given at St. Bartholomew's Hospital by Mr. Butlin; at St. George's by Dr. Whipham; at Guy's by Mr. Symonds; at King's College Hospital by Mr. Barrow; at the London Hospital by Mr. T. M. Hovell, who delivers a course of lectures on the subject; at St. Mary's Hospital by Dr. Scanes Spicer; at the Middlesex Hospital by Mr. Hensman (with Diseases of the Ear); at St. Thomas's Hospital by Dr. F. Semon; at University College Hospital by Mr. Bilton Pollard; at the Westminster Hospital by Dr. de Havilland Hall; at the Bristol Royal Infirmary by Mr. Harsant; at the Manchester Royal Infirmary by a special lecturer to be appointed; at the Newcastle-on-Tyne Infirmary by Dr. Hume (with Diseases of the Ear); in the Edinburgh Royal Infirmary by Dr. McBride (with Diseases of the Ear); in the Glasgow Royal Infirmary by Dr. Newman; in the Glasgow Western Infirmary by Dr. Walker-Downie; and at Aberdeen by Dr. McKenzie Booth.

Diseases of the Skin.—For the teaching of this important department of medicine, special provision is made in all the London Hospitals, in the Bristol General Hospital, in the Manchester Royal Infirmary, and in the Newcastle-on-Tyne Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, Dr. Radcliffe Crocker, the physician in charge of this department, gives clinical lectures on diseases of the skin once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

Orthopædic Surgery is taught at St. Bartholomew's Hospital by Mr. Walsham; at the Westminster Hospital by Mr. Richard Davy, and at St. Mary's by Mr. Walter Pye.

Mental Diseases.—Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances: thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, those of the London Hospital to Bethnal House, and those of the Middlesex Hospital to the Leavesden Asylum. Two students of the London Schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At Cambridge, clinical instruction is given at the county asylum at Fulbourn. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Mr. Bevan Lewis, the medical director, gives clinical lectures in addition to a course of systematic lectures at the school. In Manchester, a course of clinical lectures on mental diseases is given to senior students of Owens College, by Mr. G. W. Mould, at the Asylum in Cheadle. Clinical instruction is given to the students of Queen's College, Birmingham, at the Borough Asylum in Lunacy and Mental Disease, and Professor Whitcombe lectures on these subjects in the summer. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Dr. M'Dowall, and the students have access to the Northumberland County Asylum, Morpeth, and to the Coxlodge, Dunston, Durham County Asylum. In the University of Edinburgh, Dr. Clouston gives a course of Medical Psychology and Mental Diseases, with practical instruction at the Morningside Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow University a course of lectures on Insanity is given by Dr. D. Yellowlees, and in St. Mungo's College by Dr. A. Campbell Clark in the District Asylum, Bothwell. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1,000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

Public Health.—Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex, and St. Thomas's Hospitals, and at King's and University Colleges. At St. George's Hospital it is included in the course of Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food is given in the hygienic laboratory. In several of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on hygiene are delivered by Dr. Ransome; in the Bristol Medical School by Mr. D. S. Davies; in the Newcastle College of Medicine by Mr. H. E. Armstrong; and in the Sheffield Medical School by Dr. Sinclair White. In Scotland, also, the instruction in Public Health is given in connection with the lectures on Medical Jurisprudence. In Dublin there is a professorship of Hygiene in the school of the Royal College of Surgeons. In London, instruction in Sanitary Science is also given in the Parkes Museum of Hygiene, Margaret Street, now amalgamated with the Sanitary Institute of Great Britain, and in the College of State Medicine, London.

PRACTICAL PHYSIOLOGY AND HISTOLOGY.—This subject is taught in all the schools, but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course is conducted by a demonstrator and two assistant demonstrators, under the superintendence of the lecturers on Physiology and Chemistry.

At *Guy's Hospital*, Mr. Golding Bird gives a course of lectures on physiology in the winter, and Messrs. Starling and Tubby give practical demonstrations during the summer session.

At *University College*, an elaborate course of instruction in Practical Physiology is given by Mr. Schäfer (Jodrell Professor of Physiology), Dr. Halliburton, and demonstrators. Practical instruction in Zoology and Comparative Anatomy is also given by the professor, Mr. Ray Lankester, and his assistants. For the details, we must refer our readers to the prospectus of the Medical Faculty, and also to that of the Faculty of Science, of the College.

At the *Westminster Hospital*, a course of lectures and demonstrations on Histology and Practical Physiology is given by Dr. P. S. Abraham.

In *Owens College*, *Manchester*, a very complete course of practical Physiology is conducted during the year by Dr. Stirling, the Brackenbury Professor of Physiology. The class meets for systematic work in Practical Histology and Physiological Chemistry, and for demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions.

Courses of Practical Biology and Practical Physiology are also given in the other provincial Medical Schools, or in institutions in connection with them.

Practical Physiology is taught in the University of Edinburgh by Professor Rutherford, assisted by Dr. Haycraft and Dr. C. W. Carlier; in that of Aberdeen by Professor McWilliam; and in that of Glasgow by Professor McKendrick. Courses are also given in the Edinburgh Extra-academical School; and in St. Mungo's College, Anderson's College, and the Western Medical School in Glasgow.

HOSPITAL APPOINTMENTS.—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For most of the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, eight house-physicians and ten house-surgeons (who must be qualified to practise), and a senior and junior assistant chloroformist, are appointed annually. A resident midwifery assistant and an ophthalmic house-surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the senior assistant-chloroformist, who receives £50. All, except the eight junior house-physicians and house-surgeons, are provided with rooms. The clinical clerks to the medical in-patients and the clerks to the physician-accoucheur are chosen from the most diligent students. Clerks and dressers are also selected to attend in the out-patient rooms and in the special departments and in the *post mortem* room. Dressers to the surgical in-patients and the surgical casualty department are selected, to the number of forty in each year, from the students (of the first year) who pass the best examination in the subjects of the first year. Other in-patient dresserships may be obtained by payment of £10 10*s*. for three months, or £16 16*s*. for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar, each with a salary of £40 a year, are appointed for twelve months. Two house-physicians, two house-surgeons, and a resident obstetrical officer are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. An electrical assistant is appointed every six months, and receives £12 12*s*. at the end of his term of office. Clinical clerks and surgeons' dressers, clinical ward clerks, and pathological assistants are appointed for three months. Each student must hold an in-patient clerkship and in-patient dressership, after the second professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistants to the dental surgeon for three months.

At *St. George's Hospital*, house-physicians, house-surgeons, an assistant house-physician, and an assistant house-surgeon are appointed, half-yearly, from among the perpetual pupils. The house-physicians and house-surgeons are appointed by the weekly board, on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit £50 with the treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties. An obstetric assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A curator of the Pathological Museum, and a medical and a surgical registrar, are appointed annually from among the senior pupils, each with a salary of £50. Two assistant medical registrars are appointed every six months by competition. This office must be held before competing for that of assistant house-physician. An assistant surgical registrar is also appointed; this office must be held, alternately with that of ophthalmic assistant, before competing for the office of assistant house-surgeon. Two demonstrators of anatomy and a demonstrator of physiology are appointed annually, each with a salary of £50. Each pupil of the hospital must act as clinical clerk and dresser before a certificate of attendance on hospital practice can be signed.

At *Guy's Hospital*, all appointments are given according to the respective merits of the candidates, and without extra payment. There are appointed annually house-physicians, house-surgeons, surgeons' dressers, and medical clinical clerks, for six months; dressers in the Eye Wards, for four months; clinical assistants, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the surgery, obstetric ward clerks, surgical clinical clerks, assistant-surgeons' clerks, for three months; obstetric residents, *post mortem* clerks, dental surgeon's dressers, aural surgeon's dressers, for two months; obstetric out-patient clerks, six weeks; extern obstetric attendants, one month; also clerks in the Electrical Department. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

At *King's College Hospital*, physician's assistants, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, five house-physicians, five house-surgeons, and a resident accoucheur, are appointed every six months; a receiving-room officer, and a senior dresser to out-patients every three months. Clinical clerks, surgical dressers, and clinical obstetric clerks are appointed every three months. Every student must act as a clinical clerk for three months in the medical out-patient department, after passing the first College of Surgeons examination. Maternity pupils reside in the hospital every week. Each student must attend at least twenty cases of midwifery; those who have attended one hundred are entitled to a special certificate. Dressers reside and board in the hospital every week. Every student must act as dresser in the surgical out-patient department for at least three months after the end of the first winter session. Three clinical assistants are appointed every three months for the medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 per annum. An unpaid clinical assistant is appointed in the ophthalmic department. A medical registrar and a surgical registrar are appointed annually; each receives £100. An instructor in anæsthetics is appointed annually, and receives £50. Every student must act as a *post mortem* clerk for three months. A dental assistant, prosectors of anatomy, and dressers in the ophthalmic and aural departments, are also appointed. The holders of resident appointments are provided with rooms and board.

At *St. Mary's Hospital* three house-physicians and three house-surgeons are appointed for six months each, and two obstetric officers for six months each; all live free of expense in the hospital. All students must act as clinical clerks and dressers for eight months after passing the primary examinations, and after having acted as dressers two months in the casualty department. Demonstrators of anatomy are appointed at salaries of £70, and a junior demonstrator at £50 a year. Two prosectors are appointed annually; each receives a certificate and £5. A demonstratorship in pathological anatomy, value £15, tenable for six months, is given after competitive examination in pathology and morbid anatomy.

At the *Middlesex Hospital*, sixteen resident appointments are open annually to competition among pupils of the hospital. The officers reside and board in the hospital free of expense. There are two casualty house-surgeons appointed annually. Six house-surgeons are appointed every year after examination; they must have a legal qualification. Six resident physicians' assistants are appointed from time to time for six months; they must have a legal qualification or hold a Broderip scholarship. A resident obstetric physician's assistant (qualified to practise) is appointed for six months. Each of the above-mentioned resident officers pays (except the casualty house-surgeon) £10 10*s.* on appointment. Non-resident physicians' assistants are appointed in the out-patient department. Clinical clerks and dressers are appointed for six months. An obstetric physician's clerk is appointed. In the out-patient department the appointments are: dresser to the assistant surgeon and to the dental surgeon; clerk to the assistant physician; dresser to the ophthalmic surgeon; clerk to the physician of the skin department, to the assistant obstetric physician, and to the surgeon to the throat and ear department. There are also extern and midwifery clerks, and *post mortem* clerks. The appointments are so arranged that every student may, during his course, take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the examining board in England or its equivalent.

At *St. Thomas's Hospital*, a resident assistant physician and a resident assistant surgeon, at a salary of £100 per annum, each with board, are appointed, and may hold office for a term not exceeding three years. Two resident and two non-resident house-physicians, four house-surgeons, two assistant house-surgeons, and a resident accoucheur are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. Two ophthalmic clinical assistants, chosen from qualified students, are appointed for six months, the senior receiving a salary at the rate of £50 per annum, and the junior being provided with commons. The house-physicians, the house-surgeons, the resident accoucheur, and dressers are provided with rooms and commons. Clinical clerks and dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Clinical assistants in the departments for diseases of the skin, throat, and ear are appointed every three months. Obstetric clerks are from time to time appointed; also assistants in the physiological laboratory, prosectors, and assistants to the demonstrator of pathological anatomy. All students have the opportunity of being engaged in the performance of the practical duties in connection with the medical, surgical, obstetrical, ophthalmic, and pathological departments of the hospital. Two hospital registrars are appointed, at an annual salary of £100.

In *University College Hospital*, eight house-physicians, six house-surgeons, eight obstetric assistants, out-patient physicians' and surgeons' assistants, clinical clerks, surgeons' dressers, and ophthalmic surgeons' assistants are selected from among the pupils. The house-physicians, the house-surgeons, and the obstetric assistants reside in the hospital, paying for their board.

At the *Westminster Hospital*, a curator of the museum and a pathologist are appointed annually, each with a salary of £50; and a medical and a surgical registrar, each with a salary of £40. Two house-physicians, two house-surgeons, and a resident obstetric assistant are appointed for six months, after examination, and are provided with rooms and commons. The surgeons' dresser of the day is provided with commons at the hospital table. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of out-patient dresser for four months; and afterwards hold the office of in-patient dresser for four months, of out-patient clinical clerk for four months, and of in-patient clinical clerk for four months. No student is eligible as in-patient dresser or clinical clerk until he has passed the Second

Examination of the Conjoint Board, or an equivalent examination.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant and two resident dressers are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months, and a resident dresser every three months.

At the *Bristol Royal Infirmary*, a house-physician, house-surgeon, and junior resident medical officer, clinical clerks and dressers, also ophthalmic, obstetric, and pathological clerks are appointed. The dressers reside in the Infirmary in weekly rotation.

At the *Bristol General Hospital*, a house-surgeon, assistant house-surgeon, and physicians' assistant, clinical clerks, dressers, pathological clerks, obstetric and ophthalmic clerks are appointed. The dressers reside in the hospital in rotation, free of expense.

In the *Leeds General Infirmary*, house-physicians, house-surgeons, physicians' clerks, surgeons' dressers, ophthalmic and aural surgeons' dressers, gynæcological ward clerks, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the casualty room, and *post mortem* room clerks are appointed during the year. The house-physicians and surgeons' dressers hold office for six months; the house-surgeons for twelve months; the others for three months. The house-physicians and house-surgeons must have at least one legal qualification. Appointments are also open to students at the Leeds Public Dispensary, and at the West Riding Lunatic Asylum.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are appointed for six months, after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three clinical clerks for each physician, three or more dressers for each surgeon, and two clerks for the Thornton Wards for Diseases of Women are appointed for three months in October, January, and May. *Post mortem* clerks are appointed for six weeks. All students must perform this duty before the schedule for the final examination is signed.

At the *Manchester Royal Infirmary* the following appointments are made:—A surgical registrar, at £100 per annum; a pathological registrar, at £100 per annum; a medical registrar, at £50 per annum; two assistant medical officers, each at £80 per annum; a chloroformist, at £75 per annum. Resident medical officer, two years, £150 per annum; ditto, at Cheadle, one year, £150 per annum; ditto, at Monsall, one year, £250 per annum; resident surgical officer, one year, £150 per annum; four house-surgeons and two house-physicians, a resident assistant at Monsall (salary £100 per annum); and one at Cheadle, each for six months. The house-physicians, house-surgeons, and the resident assistant at Monsall must possess a qualification which can be registered. Four or more clinical clerks are attached to each physician and assistant physician, and four or more dressers to each surgeon and assistant surgeon. Additional clinical clerks are appointed to assist in the departments for diseases of the ear and throat, and to assist the surgical registrar.

In the *Newcastle-on-Tyne Infirmary*, four times in the year, two resident medical assistants, two resident surgical assistants, three non-resident clinical clerks, and sixteen dressers are appointed for three months. An assistant curator of the museum is annually appointed from among the senior students. Assistant demonstators of anatomy, prosectors for the lecturer on anatomy, assistant physiologists, pathological assistants, assistants to the dental surgeon, and assistants in the Eye Department are also elected. The assistant demonstrators of anatomy receive £5 each; the others are unpaid.

In the *Edinburgh Royal Infirmary*, the appointments are as follows:—1. Resident physicians and surgeons are appointed for six months, and live in the house free of charge. Candidates must be registered as legally qualified practitioners. 2. Non-resident clerks are also appointed for six months. 3. Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. 4. Assistants in the pathological department are appointed by the pathologists. No fees are paid for any medical or surgical appointment.

In the *Glasgow Royal Infirmary* all appointments are open. There are four physicians' and six surgeons' assistants who board in the hospital, and act in the capacity of house-physicians and house-surgeons. The appointments are made for six months, and are open to students who have completed their curriculum and passed all their examinations except the last, or to gentlemen who have a legal qualification in medicine or surgery, to whom preference will be given. Clerks and dressers are appointed by the visiting physicians and surgeons. From the large number of cases of acute diseases and accidents of varied character received into this hospital these appointments are numerous and valuable to students. In the Pathological Department assistants are also appointed by the pathologist.

TUTORIAL INSTRUCTION.—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases awarded after examination in subjects of preliminary education; in others, they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

FRANCE.

GRADUATION IN MEDICINE.

The degree of Doctor of Medicine in the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the Government.

The studies necessary for obtaining the degree extend over four years. During the first three years, the student may attend either one of the Faculties, or an *École de plein exercice*, or one of the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be pursued in a Faculty or in an *École de plein exercice.*

Sixteen inscriptions must be taken out, one every three months. On taking the first inscription, the student must present his certificate of birth, and, if a minor, the consent of his father or guardian; also the diplomas of Bachelor of Letters and of Sciences.

Every candidate must go through a course of practical study as follows:—*First Year:* Physics, Chemistry, and Natural History. *Second and Third Years:* Anatomy and Physiology. *Fourth Year:* Operative Surgery and Pathology. Attendance on hospital practice (which is also obligatory) commences after the eighth inscription and continues through the remaining period of study.

There are five examinations: the first, after the fourth inscription and before the fifth; the first part of the second, three months after the tenth inscription and before the twelfth, and the second part after the twelfth and before the fourteenth inscription; the third cannot be passed until three months after the sixteenth inscription. Candidates who do not pass the first examination in October or November at the latest are put back to the end of the scholastic year, and cannot take out any inscriptions during that year. Candidates rejected at the other examinations are put back for three months, except after the examination in Practical Surgery, when the period is six weeks. Two other examinations have to be undergone, and the candidate must present a thesis on a subject chosen by himself.

The subjects of the five examinations are as follows:—*First Examination:* Physics, Chemistry, and Natural History, in their application to Medicine. *Second Examination:* First part, Dissections, Anatomy, and Histology (oral); second part, Physiology (oral). *Third Examination:* First part, Performance of Operations, External Pathology, Midwifery, and Operative Surgery (oral); second part, Internal Pathology or Medicine, and General Pathology. *Fourth Examination:* Hygiene, Forensic Medicine, Therapeutics, Materia Medica, and Pharmacology. *Fifth Examination:* First part, Clinical Surgery and Obstetrics; second part, Clinical Medicine and practical demonstrations in Pathological Anatomy.

Pupils of the *Écoles de plein exercice* may pass the first and second examinations in the school. For this purpose, two examinations are held each year; one in August, for the first examination, and the second part of the second; the other in April, for the first part of the second examination. Rejected candidates may present themselves, after three months, for examination by a Faculty of Medicine. Students of preparatory schools in which the instruction corresponds with the programme of the first three years of study required may pass in them the first examination and the first part of the second; the second part of the second examination must be passed before a Faculty or in an *École de plein exercice.* Pupils of other preparatory schools may defer the first examination till after the twelfth inscription. In that case, they undergo both parts of the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are submitted to examinations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

Candidates for the diploma of *officier de santé* must take out sixteen inscriptions, the regulations regarding which are the same as for the degree of doctor. The programme of practical instruction to be pursued is: *First Year,* Physics, Chemistry, and Natural History; *Second Year,* Anatomy and Physiology; *Third Year,* Anatomy, Physiology, and Operative Surgery; *Fourth Year,* Anatomy and Operative Surgery. Attendance on hospital practice commences with the fifth inscription. The whole of the sixteen inscriptions may be taken out in a preparatory school, where a complete course of instruction, as mentioned above, is given. At other preparatory schools, not more than fourteen inscriptions can be taken out.

There are six examinations: one at the end of each of the first three years; first, in Physics, Chemistry, Natural History, and Elementary Anatomy (bones and ligaments); second, in Descriptive Anatomy and Physiology; third, in Medicine and Surgery. After the sixteenth inscription there are three final examinations (*examens définitifs*); first, in Dissection, Anatomy, and Physiology; second, in Operative Surgery, Medicine, Surgery, Therapeutics, and Materia Medica; third, in Clinical Medicine, Surgery, and Midwifery. No thesis is required.

Foreign medical practitioners, desirous of permission to practise in France as *officiers de santé,* must present their diplomas to the Secretary of the Faculty of Medicine. If the Council of the Faculty report favourably the permission is granted. Foreign practitioners wishing to obtain the degree of Doctor of Medicine must pass the last two examinations and present a thesis, paying the full fees for all the examinations they would have had to pass had they gone through the ordinary course. Exception may be made in the case of medical men of acknowledged eminence, to whom the Faculty may at once grant all the privileges of the doctorate.

Foreigners may be admitted to a French faculty on presenting their certificates of study in their own countries and paying a fee of £4.

A small fee is required for each inscription, the sum thus payable amounting in the aggregate to 480 *francs.* The fees to be paid each year, including practical work and library (10 *francs*), are:—First year, 70 *francs*; second and third years, each 50 *francs*; fourth year, 30 *francs*; for examination for the degree of Doctor, each examination or part of examination, 55 *francs* (in all 440 *francs*); thesis, 240 *francs*. The total expense of the medical curriculum, including graduation fees, is thus 1,360 *francs*. *Officiers de santé* pay 30 *francs* for each of the three yearly examinations; for the three final examinations 100, 110, and 210 *francs* respectively.

MEDICAL EDUCATION.

Medical education in France is under the control of the State, and is given in the Faculties of Medicine and Pharmacy, the *Écoles de plein exercice*, and the Preparatory Schools of Medicine and Pharmacy.

The Faculties are six in number: three—those of Paris, Montpellier, and Nancy—are schools of Medicine; the others—at Bordeaux, Lille, and Lyons—are mixed Faculties of Medicine and Pharmacy. There are three *Écoles de plein exercice*—Nantes, Marseilles, and Toulouse. There are Preparatory Schools at Algiers, Amiens, Angers, Besançon, Caen, Clermont, Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, and Tours.

Faculty of Medicine in Paris.

The School of Medicine in Paris is open to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies; all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 40 *francs* is expected from each student.

The medical session begins on November 1.

The instruction in the Faculty of Medicine in Paris is given by the following professors: M. Farabœuf, Anatomy; Mathias Duval, Histology; M. A. Gautier, Medical Chemistry: M. Baillon, Natural History; M. Gariel, Medical Physics; M. Regnauld, Pharmacology; M. Dieulafoy, Internal Pathology or Medicine; M. Duplay, Practical Surgery; M. Lannelongue, Surgery; M. Hayem, Materia Medica and Therapeutics; M. Cornil, Pathological Anatomy; M. Laboulbène, History of Medicine and Surgery; M. Proust, Hygiene; M. Brouardel, Forensic Medicine; M. Straus, Comparative and Experimental Pathology; MM. G. Sée, Potain, Jaccoud, Peter, Clinical Medicine; MM. Richet, Verneuil, Trélat, Le Fort, Clinical Surgery; MM. Tarnier and Pinard, Clinical Midwifery; M. Grancher, Diseases of Children; M. Charcot, Diseases of the Nervous System; M. Panas, Clinical Ophthalmology; M. Ball, Mental Pathology; M. Fournier, Diseases of the Skin and Venereal Diseases.

Auxiliary courses are given by *agrégé* professors as follows: Anatomy and Physiology, MM. Rochet, Reynier, Rémy, Quenu, and Poirier; Physics, M. Guébhard; Medical Chemistry, MM. Hanriot and Pouchet; Natural History, M. Blanchard; Medicine and Forensic Medicine, MM. Landouzy, F. Raymond, Troisier, Joffroy, Hanot, Quinquaud, Hutinel, A. Robin, Brissaud, Ballet, Déjerine, and Chauffard; Surgery, MM. Schwartz, Jalaguier et Brun, Peyrot, Bouilly, Reclus, Kirmisson, Segond, Campenon; Obstetrics, MM. Budin, Ribemont-Dessaignes, and Maygrier.

Practical instruction is given under the guidance of the following *chefs des travaux*: M. Poirier, Anatomy; M. Faguet, Natural History; M. Hanriot, Chemistry; M. Guébhard, Medical Physics; M. Rémy, Histology; M. Laborde, Physiology; M. Brault, Pathological Anatomy.

The Faculty of Medicine possesses laboratories for Anatomy (Professor Farabœuf), Physics (Professor Gariel), Chemistry (Professor Gautier), Biological Chemistry (Professor Gautier), Practical Forensic Medicine (Professor Brouardel), Botany (Professor Baillon), Experimental and Comparative Pathology (Professor Straus), Therapeutics (Professor Hayem), Pharmacology (Professor Regnauld), Pathology (Professor Bouchard). There are also laboratories for practical instruction at several of the hospitals.

Attached to the Faculty of Medicine are the Botanical Gardens at the Museum of Natural History; the Orfila Museum of Anatomy and Zoology, at the École de Médecine; the Dupuytren Museum of Pathological Anatomy, in the École Pratique; and the Library.

The prizes of the Faculty of Medicine are the following:—The Corvisart prize, a gold medal of the value of 400 *francs* (£16) is offered for competition to all pupils of the Faculty who have also entered to one of the medical clinics. The subject is some question in medicine, the answer to which must be derived exclusively from facts observed in hospital practice. The Montyon prize, consisting of 700 *francs* (£28), is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 *francs* (£80) is offered annually to the inventor of an operation, or of instruments, bandages, &c., of general utility, and superior to anything of the kind that has been already in use. The Chateauvillard prize, also of 2,000 *francs*, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 of the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 *francs* (£40) is awarded, under the will of the late Baron de Trémont, to a meritorious but poor student. An annual sum of 1,000 *francs*, bequeathed by Madame de Barkow, is applied to a similar purpose in the superior educational establishments in Paris. The Lacaze prize of 10,000 *francs* (£400) is offered biennially for the best essay on phthisis or on typhoid fever, the subjects being taken alternately. A sum of 1,500 *francs* (£60) was bequeathed by M. Jeunesse to found an annual prize for the best work on hygiene. M. Jeunesse also left a sum of 750 *francs* (£30) to found a biennial prize for the best work on histology. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinction, in the form of silver medals, bronze medals, and honourable mention. Students' bursaries of the value of 1,200 *francs* are awarded after competition. Each bursary is tenable for one year; and the holder, if desirous of its renewal, must again compete. Candidates must be natives of France, and at least eighteen years of age. Travelling bursaries are also awarded.

The College of France.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard; General Anatomy, by M. Ranvier; Natural History of Organised Bodies, by M. Marey; Comparative Embryogeny, by M. Balbiani; Organic Chemistry, by M. Berthelot; Mineral Chemistry, by M. Schützenberger. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François-Franck, is open to persons who enter their names for the purpose with the Secretary of the Faculty of Sciences, and who have a sufficient knowledge of Physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology, but special attention is paid in this laboratory to the phenomena of circulation and motion, and their registration by suitable apparatus.

Free Medical Instruction.

In addition to the professors in the Faculty of Medicine, there are a number of extra-academical lecturers whose teaching is recognised.

The Hospitals of Paris.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8.30 or 9 A.M. The following is a list of these institutions :—

Hôtel Dieu, Parvis Nôtre Dame.—559 beds. *Physicians :* Drs. G. Sée, Empis, Bucquoy, Dumontpallier, Mesnet, and Proust. *Surgeons :* MM. Richet, Tillaux, and Panas. The hospital possesses laboratories for histology, chemistry, and physiology ; also a library for the use of the *internes.*

Hôpital de la Charité, 47 Rue Jacob.—516 beds. *Physicians:* Drs. Potain (Clinical Professor), Blachez, Féréol, Laboulbène, Desnos, and Luys. *Surgeons :* MM. Trélat (Clinical Professor) and Després. *Obstetric Physician :* M. Budin. The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1 Rue Lacépède.—709 beds. *Physicians :* Drs. Jaccoud, Bourcy, Troisier, Audhoui, Hutinel, Lancereaux, and Brouardel. *Surgeons :* MM. Verneuil and Polaillon. *Obstetric Physician :* M. Maygrier.

Hôpital Lariboisière, 2 Rue Ambroise Paré.—704 beds. *Physicians :* Drs. Bouchard, C. Paul, Proust, Siredey, Duguet, Paul, Gouguenheim, and Gérin-Roze. *Surgeons :* MM. Périer, Anger, Berger, Delens (Diseases of the Eye). *Obstetric Physician :* M. Porak. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

Hôpital Saint-Antoine, 184 Faubourg Saint-Antoine.—785 beds. *Physicians :* Drs. Hayem, Tenneson, Tapret, Gingeot, Moutard-Martin, Landrieux, Hanot, and Raymond. *Surgeons :* MM. Marchand and Monod.

Hôpital Necker, 151 Rue de Sèvres.—454 beds. *Physicians:* Drs. Peter, Rigal, Rendu, and Dieulafoy. *Surgeons :* MM. Le Fort and Guyon. The Civiale museum, containing numerous calculi and specimens of diseases of the urinary organs, is attached to the hospital.

Hôpital Tenon, Rue de la Chine.—825 beds. *Physicians :* Drs. Straus, Landouzy, Dreyfus-Brisac, Danlos, Cuffer, Moizard, Roques, and Barth. *Surgeons :* MM. Peyrot and Blum. *Obstetric Physician :* Dr. Auvard.

Hôpital Beaujon, 208 Faubourg Saint-Honoré.—432 beds. *Physicians :* Drs. Millard, Guyot, Gombault, and Fernet. *Surgeons :* MM. Léon Labbé, Cruveilhier, and Duplay. *Obstetric Surgeon :* M. Ribemont-Dessaignes. The hospital possesses a library containing 1,500 volumes and a large number of theses.

Hôpital Cochin, 47 Faubourg Saint-Jacques.—386 beds. *Physicians :* Drs. Gouraud and Dujardin-Beaumetz. *Surgeon :* M. Th. Anger. *Obstetric Surgeon :* M. Bouilly. An obstetric department is attached to this hospital, but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42 Rue de Sèvres.—628 beds. *Physicians :* Drs. Ball, Damaschino, Ferrand, and Cornil. *Surgeon :* M. Nicaise.

Hôpital Bichat, Boulevard Ney.—181 beds. *Physicians :* Drs. Huchard and Lacombe. *Surgeon :* M. Terrier.

Hospice de la Salpêtrière, Boulevard de l'Hôpital. 3,171 beds for old persons, and 720 for female lunatics. *Physicians :* Drs. Charcot and Joffroy. *Surgeon :* M. Terrillon. *Physicians to the Lunatic Department :* Drs. Falret, A. Voisin, and J. Voisin. There is a medical library founded and supported by the *internes* ; it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system ; and MM. Falret and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,658 beds for old persons, and 640 for male lunatics and epileptics (the latter number includes nearly 340 epileptics and backward children). *Physician :* Dr. Déjerine. *Surgeon :* M. Reclus. *Physicians to the Lunatic Department:* Drs. Charpentier, Deny, Féré, and Bourneville. *Assistant Physician :* M. Chaslin. The library, which was founded in 1865, contains about 2,600 volumes.

Hôpital des Enfants Malades, 149 Rue de Sèvres.—593 beds. *Physicians :* Drs. Grancher, Labric, Simon, Ollivier, and Descroizelles. *Surgeon :* M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital des Enfants Assistés, 74 Rue Denfert Rochereau.—675 beds. *Physician :* Dr. Sevestre. *Surgeon :* M. Guéniot.

Hôpital Trousseau, 89 Rue de Charenton.—463 beds. *Physicians :* Drs. Legroux, D'Heilly, Cadet de Gassicourt. *Surgeon :* M. Lannelongue.

Hôpital Saint-Louis, 40 Rue Bichat.—1,043 beds ; of which 625 are occupied by cases of skin disease, 38 by obstetric, and the rest by surgical cases. *Physicians :* Drs. Quinquaud, Lailler, Vidal, Hallopeau, E. Besnier, and Fournier ; *Surgeons :* MM. Péan, Le Dentu, and Lucas-Championnière ; *Accoucheur :* M. Bard. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. There is a museum containing several hundred models and drawings, illustrating diseases of the skin ; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111 Boulevard du Port-Royal.—327 beds, devoted exclusively to the reception of cases of venereal disease. *Physicians :* Drs. Mauriac and Du Castel ; *Surgeon :* M. Humbert.

Hôpital de Lourcine, 111 Rue de Lourcine.—243 beds. *Physicians:* Drs. Martineau and Balzer; *Surgeon:* M. Pozzi. Students are admitted to the hospital by special ticket.

Hôpital Andral, 35 Rue des Tournelles.—100 beds. *Physician:* Dr. Debove.

Hôpital Broussais, 96 Rue Didot.—148 beds. Served by two physicians and one surgeon from the Bureau Central.

Maison d'Accouchement, 123 Boulevard du Port-Royal.—402 beds. *Physician:* Dr. Labadie-Lagrave; *Surgeon:* M. Guéniot; *Assistant-Surgeon:* M. Bouilly. The hospital is employed for the education of midwives. Attached to the hospital is also a school of midwivery for students under the direction of M. Pinard.

Clinique d'Accouchements, 89 Rue d'Assas.—130 beds. *Surgeon:* M. Tarnier.

HOSPITAL APPOINTMENTS IN PARIS: CONCOURS.

The medical staff of each hospital in Paris consists of—1. Physicians, Surgeons, and Obstetric Medical Officers; 2. *Internes* and *Externes* in Medicine and in Surgery; 3. *Pharmaciens*; 4. *Internes* in Pharmacy.

All the appointments in the hospitals of Paris are obtained by *concours*; and, when vacant, are eagerly competed for.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater, and there are generally two or three *internes* and five or six *externes*.

The *interne* is the direct assistant of the hospital physician or surgeon; he accompanies him in his morning visit, and himself visits the patients in the evening. The *internes* remain on duty in turn to attend to accidents and urgent cases of illness.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases.

The *concours* for the *externat* generally takes place in October. Candidates must not be under 18, nor above 26 years of age. They must produce, 1, a register of birth; 2, a certificate of revaccination; 3, a certificate of good conduct, signed by the mayor of the commune in which the candidate is domiciled; 4, a certificate of at least one inscription in a Faculty of Medicine. The examination consists in, 1, an oral description of some subject in descriptive anatomy; 2, a similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce a certificate of having performed the duties of *externe*, at least from the first day of the preceding January, without interruption (unless this have been unavoidable); also certificates from the physicians and surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. This is followed by an oral examination in the same subjects, ten minutes being allowed for each answer after ten minutes of consideration. The maximum of marks obtainable for the written examination is 30; for the oral 20. At the end of the *concours*, the candidates are classified according to the number of marks; and the 35 to 40 first on the list are nominated *internes*.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat*.

The *externe* who takes the first place in the *concours* receives the Arnal prizes (books and instruments, value 500 *francs*). The *interne* who comes out first in the *concours* for the appointment receives the Dusol prize (300 *francs*), the Godard prize (a box or case of instruments, value 200 *francs*); and, if he be attached to the surgical department of the Charité Hospital, the Barbier prize of about 1,250 *francs*. The Burlaud prize of 500 *francs* is awarded to one of the *internes* placed fifth, sixth, and seventh on the list; generally, however, the three divide it. The Civiale prize, of the value of 1,000 *francs*, is given every second year for the best essay, by an *interne* on duty, on some point in the pathology of the genito-urinary passages.

The *internes* receive 600 *francs* the first year, 700 *francs* the second year, 800 *francs* the third year, and 1,000 *francs* the fourth year. Most of them are also provided with lodging, fire, and light; if not, they receive 600 *francs* yearly in lieu of lodging.

The *externes* at the central hospitals (Charité, Clinique, Hôtel-Dieu, and Pitié) are not paid; at those more distant from the centre of the city (Necker, Cochin, Enfants Malades, &c.) they receive 300 *francs* yearly; at others more distant (Beaujon, Lariboisière, Saint-Antoine, Trousseau, Saint-Louis), 365 *francs* yearly; at the Maison de Santé, 300 *francs* yearly, and 300 *francs* for expenses; at the Tenon Hospital, in consideration of the distance, 50 *francs* monthly.

Candidates for the office of physician, surgeon, or obstetric officer at the hospitals are admitted to *concours* on producing evidence of being natives of France, or naturalised, and of having had the degree of Doctor of Medicine for two years at least. They have to undergo a written and oral examination on the various branches of medicine and surgery.

GERMANY.

GRADUATION IN MEDICINE.

In the German Empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine—namely, those of Berlin, Bonn, Breslau, Erlangen, Freiburg, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practise Medicine in this Empire unless he has passed the Staats-Examen. The law forbids any one to call himself *Arzt*

(Physician) unless he have passed the State Board: or Doctor, unless he have obtained the degree after examination at some University. The Doctor who has not passed the State Board can hold no professional appointment, nor can he receive payment for his services. The practitioner who is neither doctor nor physician, if any mishap occur through his ignorance, is punished by fine and imprisonment. Most students pass both examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma of any kind can be obtained in Germany without a certificate of general education, obtained after examination at a gymnasium or public school in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this or an equivalent certificate must pass an examination in these subjects.

The number and character of professorial chairs in the Medical Faculties vary much in the different Universities; but in all there are three classes of teachers—professors, extraordinary professors, and *Privat-Docenten.*

The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the State or University, a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary varies from £120 to £480 annually, and is increased every ten years by the addition of from £20 to £50. The students' fees for the entire course vary in different schools from £36 to £52.

The extraordinary or assistant professors are appointed from among the *Privat-Docenten.* As a rule, their remuneration is derived solely from students' fees, but occasionally a small fixed salary is allowed.

There are no independent schools in Germany; but young men of ability can establish themselves as private teachers, demonstrators, &c., in the immediate vicinity of the Universities, relying on their own abilities to secure pupils. These are the *Privat-Docenten,* much of whose teaching consists in giving short courses, of from six to eight weeks' duration, on special subjects. Their remuneration is from students' fees, and they may not underbid the regular professor. At some Universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years, whilst at some it extends over four years. The following lectures are the least which will be accepted by any of the University Faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly; Obstetrics and Gynæcology, with Clinics, three hours weekly; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly; Forensic Medicine, two hours weekly. For two years: Special Pathology and Medical Clinic at a Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operations, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course.

REGULATIONS FOR THE STATE EXAMINATION.

The following are the regulations for the German Staats-Examen, as decided by an Order in Council, dated June 2, 1883. They came into force on Dec. 1, 1883.

1. Permission to practise Medicine within the German Empire may be granted by the following bodies:—*a.* The central authorities of those confederate States which possess one or more universities—namely, the Universities of the kingdoms of Prussia, Bavaria, Saxony, and Würtemberg, of the Grand Duchies of Baden, Hesse, and Mecklenburg-Schwerin, together with the Universities of the Grand Duchy of Saxony and of the Saxon Duchies; *b.* The Ministry of Alsace-Lorraine.

2. Permission to practise is granted to any one who has passed a complete professional examination.

3. The examination may be conducted by a medical examining commission in a University of the German Empire. The commission, including the president and secretary, is chosen every year after consultation with the Medical Faculty of the University in which the examinations are to be held.

4. The examinations commence in November, and are not continued beyond the middle of July in the following year. Applications for admission to the examination are received by the proper authorities up to Nov. 1; delayed applications can only be granted for special reasons. Candidates who complete the prescribed course of medical study at Easter require, in order to be admitted to examination during the current examining year, a special permission, which is only granted under exceptional circumstances. The application for admission to examination must be accompanied by the following documents:—*a.* Evidence of a full course of instruction at a gymnasium of the German Empire; certificates from a gymnasium outside the Empire are only exceptionally received; *b.* Evidence of having gone through a course of medical study of at least nine half-years' duration, in a University of the German Empire; certificates from foreign universities are recognised, wholly or in part, only in exceptional circumstances; *c.* Evidence that the candidate has passed the medical preliminary examination (*Verprufung*) in a German University, and has subsequently studied Medicine in a University during at least four half-years; *d.* Evidence that the candidate has, during at least two complete half-years, been occupied as medical officer (*Praktikant*) in the surgical, medical, and obstetrical wards of a hospital; that he has himself conducted at least two labours in the presence of his teacher as an assistant; and that he has acted as *Praktikant* for a half-year in an ophthalmic hospital; *e.* A short account of the candidate's life. Within three weeks after receiving permission to present himself, the candidate must apply personally to the President of the Examining Committee, producing his permission and a receipt

for the fees. No special notice of this is given to the candidate.

5. The examination embraces :—*a.* Anatomy; *b.* Physiology; *c.* Pathological Anatomy and General Pathology; *d.* Surgery and Ophthalmic Surgery; *e.* Medicine; *f.* Obstetrics and Gynæcology; *g.* Hygiene.

6. The examination in Anatomy includes :—*a.* A demonstration of the parts contained in one of the principal cavities of the body, or a dissection and demonstration of some region of the trunk or limbs; *b.* The making and demonstration of an anatomical preparation, to be followed by an examination in Osteology, and by one on the viscera, nerves, or vessels, of a preparation placed before the candidate; *c.* The making and demonstration of a microscopic preparation, and an examination in Histology.

7. In the Physiological examination the candidate has to give *vivâ voce* answers to two questions.

8. In the Pathological examination the candidate must—*a.* Make a complete examination of at least one of the three principal cavities of the body, and write a report on the same; *b.* Explain one or more pathological preparations, one at least of which must be microscopic, and also answer a question in general Pathology, and one in Pathological Anatomy.

9. Each of the divisions *a*, *b*, *c*, and *g* of the examination is conducted by one examiner. Not more than four candidates can be examined at the same time in any division.

10. The Surgical and Ophthalmological examination embraces four parts, three relating to General Surgery and one to Diseases of the Eye. The three surgical portions of the examination are conducted by two examiners in the surgical wards of a large general hospital, or in a University clinic, or on the patients in a polyclinic. *a.* On each of two consecutive days the candidate has to examine a patient in the presence of an examiner, and to give the previous history, diagnosis, prognosis, and treatment of the case; the record is to be given to the examiner, and, on the same day, the candidate must write at home a critical commentary on the case, and deliver it next morning, dated and signed, to the examiner. *b.* He must, during the next seven days, visit each of the two patients at least once a day, or, if the examiner require, twice daily, and keep, in a form which is supplied to him, a daily report of the progress of the case; if the patient die before the end of the seven days he must write a commentary, with an account of the *post mortem* examination. If the patient be discharged before the end of the seven days, the examiner may determine whether the candidate shall examine another patient. The candidate is also required to give evidence, on other patients, of his ability to recognise surgical diseases, and of his skill in performing minor surgical operations. *c.* He must undergo a *vivâ voce* examination in operative surgery, perform on the dead body an operation, such as the ligature of an artery, and show that he possesses a knowledge of instruments adequate for a practising surgeon. *d.* He must be examined orally and practically on fractures and dislocations. Two examiners must be present at *c* and *d.* Each examiner must be present at least three times during the examination (*b*) to go through the report with the candidate, and, if necessary, require additions. In the clinical portion of examination (*a*) and (*b*) not more than three candidates, in the technical part not more than six, can be examined at the same time. The examination in Ophthalmology is conducted by one examiner, in whose presence the candidate must examine and report on a case of disease of the eye. He must visit the patient for three subsequent days, and during this time prove, on other cases, that he possesses a knowledge of the principles of ophthalmic surgery. Three candidates at most are admitted simultaneously to this examination.

11. The Medical Examination is conducted, as regards the clinical portion, on the same plan as the surgical; and the candidate has to answer, in writing, in the presence of an examiner, questions on prescribing, to state the maximum doses of medicinal substances shown to him, and to give oral proof that he has an adequate knowledge of Pharmacy and Toxicology. This portion of the examination may be entrusted to a third examiner. Not more than three candidates can be examined at the same time.

12. The Obstetric and Gynæcological examination is conducted by two examiners in a public lying-in institution. *a.* The candidate must, in the presence of the examiner or of an assistant medical officer of the institution, examine a woman in labour, and state the period of labour, the position of the child, the prognosis, and the proper proceeding to be followed; in cases of normal, and, if required, of abnormal labour, he must apply the necessary aid, including operation; and, after the labour is completed, he must write within twenty-four hours a critical account of the case and hand it to the examiner the next day. *b.* During the next seven days he must visit the woman twice daily, and must draw up a complete report on the case of the mother and child, and on any disease by which they may be affected. During the same time he will have opportunities of proving his knowledge of pregnancy and labour and of the diseases of women. If the woman who has been confined die before the end of seven days, he must draw up a critical report of the case, with an account of the necropsy. *c.* The candidate must, in the presence of both examiners, show his acquaintance with recognised obstetric operations, and must, on the phantom, make the diagnosis of the various abnormal presentations, perform turning, and apply the forceps. Not more than one candidate can be clinically examined on the same patient; and, in the technical examinations, not more than four can be examined simultaneously.

13. In Hygiene, the candidate has to give oral answers to two questions put by one examiner in the presence of the president. Each candidate is examined for not longer than fifteen minutes.

14. The questions to be put in the Sections 6, *b*, *c*, 7, 8*c*, 10A *c*, *d*, and 13 are determined by lot. If necessary, the examiner may put other questions bearing on the subject of examination.

15. Students of medicine are admitted to the first three and the seventh divisions of the examination; those who have attended or held office in the respective clinics are admitted to the clinical portions.

16. A special report is made of the result of each division of the examination; with, if the judgment be 'insufficient' or 'bad,' a short statement of the grounds of the decision.

17. The questions and the patients in each examination are seen by the candidate for the first time at its commencement. As a rule, an interval of not more than eight days comes between two divisions of the examination. Candidates for admission to the examination in Physiology must have

passed that in Anatomy; and both these must have been passed before admission to the remaining portions. The order in which these may be taken is determined by the president; but the examination in Obstetrics and Gynæcology must not immediately follow that in Pathology. If a candidate fail in any one of the subjects except Anatomy and Physiology, he may either present himself at once for examination in the other subjects, or defer it until he is again examined in the subject in which he has failed.

18. The result of the examinations is denoted by the terms 'very good,' 'good,' 'sufficient,' 'insufficient,' and 'bad.' A candidate on whom one of two examiners makes the report 'insufficient,' or 'bad,' is rejected.

19. After the completion of the examinations in each division, the reports are delivered to the president, who sums up the results.

20. If the result of the examination in any one division or part of a division be 'insufficient' or 'bad,' the candidate must be again examined in that subject. If the decision on an entire division be 'insufficient,' the candidate is not readmitted to examination under three months; if 'bad,' not under six months. If the candidate fail in a portion of one of the divisions, the interval must be at least six weeks for 'insufficient,' and at least three months for 'bad.' In all cases the re-examinations must be undergone in the next following examination year at latest, otherwise the previous portions of the examination must be repeated. Exceptions are allowed only for special reasons. A candidate rejected at the second examination is not again admitted to examination except under special circumstances.

The fees for the examinations amount to 200 *marks* (about £10); namely, Anatomy, 20; Physiology, 12; Pathology, 16; Surgery and Ophthalmology, 57; Medicine, 35; Obstetrics and Gynæcology, 24; Hygiene, 6; Expenses, 30.

PRELIMINARY MEDICAL EXAMINATION.

The following are the regulations for the examinations referred to in Section 4 *c.* of the preceding :—

1. The preliminary medical examination is conducted by the examining board of the University in which the candidate has matriculated. Exceptions can only be allowed by the Chancellor of the Empire acting in conjunction with the central authority. The examining board consists of the Dean of the Medical Faculty as president, and the teachers of the subjects of examination.

2. The president has the management of the examination. As many examinations are held in each academical half-year as will meet the demands. Applications made later than fourteen days before the end of the lectures have no claim to consideration during the current half-year. Not more than four candidates are admitted to any one examination.

3. Applications for admission to examination must be addressed to the president, and must be accompanied by (*a*) a certificate of maturity from a gymnasium, (*b*) evidence of professional study during at least four half-years in a German University. The regulations concerning recognition of foreign gymnasia and universities are similar to those for the Staats-Examen.

4. If the student be admitted, and have paid the fee, he receives through the president at least two days' written notice of the examination. If he do not appear at the right time, or fail to appear at all, half the fee is forfeited, and he is put back to one of the next examination terms.

5. The examination is oral and public, the president being present throughout. The student is examined in Anatomy, Physiology, Physics, Chemistry, and Botany by the teachers of the respective subjects, and in Zoology by a teacher of Anatomy or of Zoology. The examination in each subject is of fifteen minutes' duration. Candidates who have obtained the degree of doctor after examination in the Natural Sciences are examined only in those subjects which were not included in the previous examination.

6. The circumstances and results of the examination are reported by each examiner to the president and other members of the Commission.

7. The result of the examination is denoted as 'very good,' 'good,' 'sufficient,' 'insufficient,' or 'bad.' If the decision be 'insufficient' or 'bad,' the candidate must be again examined in the subjects in which he has failed. Botany and Zoology are counted together in estimating the result. The interval of time that must elapse before the candidate can be again examined varies from two to six months. It is fixed by the president, with the consent of the examiner.

8. The re-examination may take place in another University, if the candidate have matriculated therein.

9. Within two days after the end of each term of examination, the president must communicate to the University authorities the result of the examination. A certificate of the result as regards each subject is given to the candidate; and if he be rejected in any subject, the time which must elapse before re-examination is stated.

10. The fee for the examination and certificate is 36 marks. Doctors in Philosophy or Natural Science (*see* Section 5) pay only the fees of the president (5 marks) and of the member of the board by whom they are examined. At re-examination, the candidate has to pay the fees of the president and of the member by whom the examination is conducted.

UNIVERSITY OF BERLIN.*

THE conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University in Berlin, are as follows :—

1. Candidates must have studied medicine at least four years in one or more regularly constituted Universities. In the case of foreigners Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. 2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. 3. The candidate has to make application to the Dean, handing in at the same time documents

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* For much of the information in this and subsequent pages we are indebted to Dr. Hardwicke's *Medical Education and Practice in all Parts of the World*. The particulars given concerning each university have in all cases been submitted to the revision of the respective authorities.

mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean before being admitted to the *examen rigorosum*. The verbal examination is generally conducted in German or Latin, and extends to all branches of medicine. At the written examination an extempore essay must be written, without any assistance, in a given time. 4. After the preliminary examination the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. 5. The *examen rigorosum* takes place before five members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners questioning the candidate for a quarter of an hour. No branch of medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. If a candidate be rejected, six months must elapse before readmission. 6. After this the candidate must present a German or Latin dissertation. The essay must be entirely original, and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty the candidate will have to get printed, at his own expense (about 85 *marks*), by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curriculum vitæ*, and at least three theses approved by the Dean. 7. After this, follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards any one belonging to the University is at liberty to oppose. Both the candidates and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education may allow the use of another language, and may also dispense with the discussion. 8. After the discussion is ended the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery takes place. After the ceremony of promotion is completed the Dean delivers the diploma to the newly created Doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 *marks*) is borne by the candidate. A copy of it is fixed on the blackboard of the Faculty, and a certain number of copies are delivered to the Registrar of the University for distribution. Promotion *in absentiâ* can on no account take place. 9. Four hundred and forty *Reichmarks* (£22) must be paid to the Dean as fees for the degree of Doctor in Medicine, of which 221 *marks* must be paid on application, and are forfeited after the *examen rigorosum* if the candidate be unsuccessful. The second portion (204 *marks* for the Faculty and 15 *marks* for the University library) may be paid either at the same time with the other, or within the period between the *examen rigorosum* and the promotion. In addition, the candidate has to pay the expenses of printing the dissertation and diploma. 10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, the dissertation must be delivered ready for printing to the Dean at the first application, and the other business of the Faculty must be such as permits them to proceed at once to the examinations.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *Docenten*, or private teachers. *Ordinary Professors:* W. Waldeyer and O. Hertwig, Anatomy; A. Bardeleben and E. von Bergmann, Surgical and Clinical Surgery; R. Virchow, Pathology; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine and History of Medicine; E. Leyden and C. Gerhardt, Medicine and Clinical Medicine; Dr. Gusserow and Dr. Olshausen, Obstetrics and Gynæcology; O. Liebreich, Materia Medica; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Pyschiatric Clinic; R. Koch, Hygiene. *Extraordinary Professors:* E. Henoch, Diseases of Children; E. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzeczka, Hygiene and Medical Police; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Diseases of the Skin and Syphilis; H. Jacobson, Medicine; H. Munk, Physiology; C. A. Ewald, Medicine; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Anatomy; O. Fräntzel, Medicine; H. Senator, Medicine; F. Busch, Surgery; H. Fasbender, Gynæcology; H. L. Schöler and J. Hirschberg, Ophthalmic Surgery; E. Küster, Surgery; M. Bernhardt, Neurology; E. Sonnenburg, Surgery; E. Schweninger, Diseases of the Skin; J. Wolff, Surgery; E. Mendel, Diseases of the Nervous System; B. Fraenkel, Laryngology; Dr. Falk, Legal Medicine. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty. *Ordinary Professors:* L. Schwendener, Botany; H. Helmholtz, Physics; A. W. Hofmann, Chemistry; F. E. Schulze, Zoology; A. W. Engler, Botany; C. Rammelsberg, Chemistry.

The institutions for Clinical Teaching connected with the University are—the Institute for Clinical Surgery (Director, Dr. von Bergmann); the Medical Polyclinic (Dr. Senator); the Obstetric Clinic (Dr. Olshausen); the Ophthalmic Clinic (Dr. Schweigger); the Aural Clinic (Dr. Lucae). In the Charité Hospital are the Medical Clinics (Dr. Gerhardt and Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Obstetric Clinic (Dr. Gusserow), the Gynæcological Clinic (Dr. Gusserow), the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin and Dr. Schweninger), for Diseases of Children (Dr. Henoch). and for Diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; the Physiological Laboratory under that of Professor Du Bois-Reymond; the Chemical Laboratory under that of Professor Hofmann; the Pharmaceutical Laboratory under that of Professor O. Liebreich; the Physical Institute under that of Dr. von Helmholtz; and the Hygienic Institute under that of Dr. R. Koch.

UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery is granted only under the following conditions:—

1. A written or printed scientific dissertation in German or Latin. 2. An oral examination in the

German language in all the chief branches of the Medical Sciences. 3. Printing of 240 copies of the dissertation, and of the diploma at the expense of the candidate. 4. Public admission to the degree. 5. Fee, 340 *marks* (£17), of which one half is for the examination.

The following is the teaching staff in the Medical Faculty of this University. *Ordinary Professors:* G. Veit, Midwifery and Gynæcology; Von Leydig, Comparative Anatomy (does not lecture); E. Pflüger, Physiology; K. Koester, General Pathology and Morbid Anatomy; Th. Saemisch, Diseases of the Eye; C. Binz, Pharmacology; A. v. la Valette St. George, Anatomy; Fr. Trendelenburg, Surgery; Fr. Schultze, Medicine; C. Pelman, Mental Diseases. *Extraordinary Professors:* H. Schaaffhausen, Anthropology; J. Doutrelepont, Dermatology and Syphilis; C. Finkelnburg, Hygiene; C. von Mosengeil, Massage; M. Nussbaum, Anatomy; D. Finkler, Medicine; Fr. Fuchs, Neurology, Electro-therapeutics; H. Ribbert, General Pathology and Morbid Anatomy; H. Walb, Diseases of the Ear; E. Ungar, Forensic Medicine, Diseases of Children; P. Schiefferdecker, Anatomy; Fr. Müller, Medicine, Laryngology. *Privatim Docentes:* J. Kocks, Gynæcology, Midwifery; C. Burger, Medicine; W. Kochs, Physiology; O. Witzel, Chirurgie; G. Krukenberg, Gynæcology and Midwifery; C. Bohland, Medicine; J. Geppert, Pharmacology; R. Thomsen, Mental Diseases and Neurology; Fr. Schenck, Physiology.

Connected with the University are medical, surgical, obstetrical and gynæcological, ophthalmic, and dermato-syphilidological clinics and policlinics; polyclinics for diseases of the ear, throat, and children; and anatomical, physiological, pharmacological, and pathological institutes.

UNIVERSITY OF BRESLAU.

The following Professors belong to the Medical Faculty of this University. *Ordinary Professors:* A. Biermer, Medicine; E. Ponfick, Pathology; H. Fischer, Surgery: R. Förster, Ophthalmic Surgery; W. Filehne, Materia Medica and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; H. Fritsch, Obstetrics and Gynæcology; C. Flügge, Hygiene. *Extraordinary Professors:* L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; I. Klopsch, Surgery; A. Neisser, Diseases of the Skin and Syphilis; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Forensic Medicine and Hygiene; H. Sommerbrodt, Medicine; O. Soltmann, Diseases of Children; H. Magnus, Ophthalmology; G. Born, Anatomy; C. Wernicke, Psychiatry; O. Rosenbach, Medicine; W. Roux, Embryology; M. Wiener, Obstetrics; A. Lesser, Forensic Medicine.

The University possesses anatomical, embryological, physiological, pathological, pharmaceutical and hygienic institutes, and clinics of medicine, surgery, obstetrics, ophthalmic surgery, syphilis and skin diseases, and mental diseases.

UNIVERSITY OF ERLANGEN.

The following are the regulations to be observed by candidates for the degree of Doctor of Medicine:—

1. Candidates must announce their intention to the Dean of the Faculty of Medicine, and present: *a*, evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b*, proof of having studied medicine in one of the German Universities, or in a corresponding medical school abroad, during at least three years; *c*, a thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own. 2. If the dissertation be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. 3. After the conclusion of the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred. 4. The candidate, if his dissertation be approved, must have it printed at his own expense. 5. The candidate must pay a fee of 300 *marks* (£15) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty. 6. If the candidate fail to pass the examination, half the fee is returned to him.

The Medical Faculty of this University consists of the following professors:—T. von Gerlach and L. Gerlach, Anatomy; F. A. Zenker, Pathological Anatomy; T. Rosenthal, Physiology; A. Strümpell, Clinical Medicine; W. Heineke, Surgery; F. Penzoldt, Pharmacology and Clinical Medicine; Frommel, Midwifery; O. Eversbasch, Ophthalmology; Bumm, Mental Diseases; Fleischer, Clinical Medicine.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

UNIVERSITY OF FREIBURG.

The Faculty of Medicine grants the degree of 'Doctor Medicinæ Universæ,' or Doctor of Universal Medicine. The following are the conditions prescribed by Ministerial decree, dated May 7, 1888:—

1. German subjects must present a certificate of 'maturity' from a German classical gymnasium, and proof of a four years' course of medical study in a German-speaking university. Foreigners must produce certificates judged equivalent to these by the Faculty, together with a testimonial of moral character from a public magistrate. 2. A scientific dissertation must be presented unless special exemption is made. 3. A fee of 300 *marks* (£15) must be paid. In case of rejection, the candidate will receive back one-third of the fee: and when he presents himself for examination again, he pays only that amount—viz., 100 *marks*. Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate is admitted to a *vivâ voce* examination, conducted in German, on the following subjects: Anatomy, Physiology, General Pathology and Morbid Anatomy, Medicine, Surgery, Midwifery and Gynæcology, Mental Diseases, Diseases of the Eye, Pharmacology, and Toxicology. If a candidate have already passed the State Examination of the German Empire, he need only be examined in three of these subjects; if not, he must be examined in six of them, including the three which stand first in the above list, and three chosen by himself. If the examination be passed, one of the following grades of honour is conferred: (1) *Summâ cum laude*; (2) *Cum laude*; (4) *Rite*. The dissertation must be printed at the expense of the

candidate, and 120 copies deposited with the University beadle not more than twelve months after the date of the oral examination. The candidate has also to bear the cost of printing the diploma.

The Medical Faculty of the University is thus constituted. *Ordinary Professors:* A. Hegar, Midwifery and Gynæcology; F. Hildebrand, Botany; W. Manz, Ophthalmic Surgery; Ch. Bäumler, Medicine; L. Thomas, Materia Medica and Medicine; P. Kraske, Surgery; R. Wiedersheim, Human and Comparative Anatomy; J. von Kries, Physiology; E. Baumann, Physiological Chemistry; H. Emminghaus, Psychiatry; E. Ziegler, Pathology; M. Schotelius, Hygiene. *Extraordinary Professors:* A. Schinzinger, Surgery; L. Kirn, Psychiatry; W. Wiedow, Midwifery and Gynæcology. *Privat-Docenten:* K. Middeldorpt, Surgery; F. Wesener, Medicine; M. Knies, Ophthalmic Surgery; C. v. Kahlden, Pathology; G. Killian, Laryngology; L. v. Udráuszky, Physiological Chemistry.

The University Library contains 250,000 volumes. There are a chemical laboratory, botanical, zoological, hygienic institute and institutions for the practical study of human and comparative anatomy, pathology, physiology, &c., and medical, surgical, obstetric, gynæcological, ophthalmic, and psychiatric clinics (lunatic asylum).

UNIVERSITY OF GIESSEN.

The Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions:—

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at a university or a medical institution. If the candidate be not a native of Germany he must produce a certificate of sufficient preliminary studies from his own country. 2. The candidate must present a dissertation on some medical subject written in German or Latin, together with a declaration in his own handwriting that the dissertation is his own composition; or a previously published treatise or literary production may be substituted. 3. The whole of the documents are laid before the Rector and the Chancellor. 4. If no objection be made, and the candidate have paid the promotion fees, the dissertation is judged by a referee; and, if he declares the work to be satisfactory, the candidate is admitted to *vivâ voce* examination. 5. This examination takes place in the German language, and lasts two or three hours. It is held in public, except when the candidate is advanced in age, or in a few other cases. 6. The examination embraces Anatomy, Physiology, Pathological Anatomy, Histology, Pathology, and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, and Obstetrics. 7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners, and at once made known to the candidate. The examination is not passed when two or more members of the Faculty declare the result to have been unsatisfactory. The degree is granted either *cum laude*, *magnâ cum laude*, or *summâ cum laude*. 8. The approved dissertation must be printed and published, and the appointed number of copies be presented to the Faculty before the promotion takes place; except when the candidate has already handed in a printed treatise. 9. Promotions to M.D. *in absentiâ* do not take place at this University, except in the case of degrees granted *honoris causâ*, by the unanimous decision of the Faculty, to men who have rendered some great service to the science of medicine. 10. The fee for promotion is 440 *marks* (£22), which must be paid at the time of the petition for admission. If the candidate be not admitted to the verbal examination, 100 *marks* are retained. If the verbal examination be not passed, half the fees are forfeited; but, if the candidate present himself again, he has only to pay half the fees.

The following are the professors in the Faculty of Medicine in the University. *Ordinary Professors:* H. Bose, Surgery; J. Wilbrant, Forensic Medicine and Hygiene; C. Eckhard, Physiology; F. Riegel, Medicine; M. Hofmeier, Obstetrics and Gynæcology; G. Pflug, Veterinary Medicine; F. W. von Hippel, Ophthalmic Surgery; C. Gæbtgens, Materia Medica; E. Boström, Pathological Anatomy. *Extraordinary Professors:* F. Birnbaum, Obstetrics; H. Steinbrügge, Otology; F. Eichbaum, Histology and Veterinary Medicine. Dr. L. Winckler teaches Veterinary Medicine.

The University Library contains 140,000 volumes. There are an academic hospital, with medical, surgical, and ophthalmic clinics, a lying-in institution, a chemical laboratory, a physiological, a pathological, and a pharmacological institute.

UNIVERSITY OF GOETTINGEN.

A degree in Medicine, Surgery, and Obstetrics is granted under the following conditions:—

1. A written essay must be sent in on any medical subject chosen by the candidate. 2. If the essay be satisfactory, the student is admitted to a *vivâ voce* examination, which lasts a few hours, and is held in German or Latin, at the option of the candidate. 3. A fee of 439 *marks* (£21 19*s*.) must be paid to the medical faculty prior to examination. 4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics. If the candidate be successful he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of the University consists of the following professors, with private teachers. *Ordinary Professors:* F. S. Merkel, Anatomy; F. Wöhler, Chemistry; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmic Surgery; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; J. Orth, Pathology; — Wolffhügel, Medical Chemistry and Hygiene. *Extraordinary Professors:* C. F. Lohmeyer, Surgery; J. Rosenbach, Surgery; W. Krause, Physiology; E. F. G. Herbst, Physiology; T. Husemann, Materia Medica and Toxicology; R. Deutschmann, Ophthalmic Surgery; O. Damsch, Medicine; K. Bürkner, Diseases of the Ear.

The following institutions are connected with the Medical Faculty: institutions for teaching animal and vegetable physiology and pharmacology, and pathology; the Ernst-August Hospital, with medical, surgical, and ophthalmic clinics; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

UNIVERSITY OF GREIFSWALD.

The Medical Faculty of this University consists of the following professors, with *privatim docentes*. *Ordinary Professors:* A. Pernice, Midwifery and Diseases of Women; F. Mosler, Medicine; H. Helferich, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; H. Schulz, Materia Medica; F. Sommer, Anatomy; R. Grawitz, General Pathology and Pathological Anatomy; F. Loeffler, Hygiene. *Extraordinary Professors:* C. Eichstedt, Midwifery, Diseases of the Skin, and Syphilis; R. Arndt, Psychology and Nervous Diseases; P. Krabler, Diseases of Children; the Baron von Preuschen von Liebenstein, Midwifery and Diseases of Women; A. Solger, Anatomy; Beumer, Forensic Medicine; Strübing, Laryngology.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

UNIVERSITY OF HALLE.

The following are the regulations for the medical degree:—

1. Application for admission to examination must be made to the Dean, and at the same time must be presented:—(*a*) *curriculum vitæ*; (*b*) certificate of maturity from a gymnasium; (*c*) certificate of having passed a *tentamen physicum* at least two years previously; (*d*) certificates of having passed, in Universities, at least eight medical scholastic half-years. 2. On making application, 360 *marks* must be paid to the Dean for the examinations and the promotion, besides which 12 *marks* must be paid before the promotion to the Secretary of the University. 3. Together with the application, the manuscript of a dissertation composed by the candidate himself on some subject in medical science must be delivered to the Dean, together with theses to be publicly discussed, and the *curriculum vitæ*, for examination and approval; the same when printed (which must be done at the candidate's expense) must fill at least two quires. 4. The examinations are held on two consecutive days by the regular professors of the Faculty. 5. The candidate has to request all the examiners personally to be present at the examination, likewise the members of the Faculty. 6. The candidate defends his treatise and the theses against two previously appointed opponents; after which those present are also called upon to join in the discussion. After the discussion is ended, the doctoral oath is administered, and the diploma delivered to the candidate. 7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, receives back from the fees paid 40½ *marks*. 8. The time for taking the degree is left to the candidate. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, else he will have to submit to re-examination, and must pay again all the fees.

The following professors, with several private teachers, constitute the Medical Faculty of this University. *Ordinary Professors:* Th. Weber, Medicine; Th. Ackermann, Pathology; H. Welcker, Anatomy; R. von Volkmann, Surgery; J. Bernstein, Physiology; A. Gräfe, Ophthalmic Surgery; E. Hitzig, Psychological Medicine; K. Eberth, Histology; Kaltenbach, Midwifery and Gynæcology; Rink, Hygiene; Harnack, Pharmacology. *Extraordinary Professors:* H. Schwartze, Diseases of the Ear; E. Kohlschütter, Medicine; A. Seeligmüller, Diseases of the Nervous System; R. Pott, Diseases of Children; A. Genzmer, Surgery; B. Küssner, Medicine; M. Oberst, Surgery; E. Schwarz, Obstetrics; Von Herff, Obstetrics; Krause, Surgery.

The University Library contains 100,000 volumes. Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-chirurgical hospital, and physiological, pathological, and pharmaceutical laboratories.

UNIVERSITY OF HEIDELBERG.

The following are the regulations to be observed for graduation in Medicine in this University:—

1. A certificate of 'maturity' from a classical gymnasium must be presented. 2. Evidence of previous regular medical study is required. 3. The same demands are made of all candidates; the only difference is that the oral examination is shortened, if evidence be produced that the candidate has undergone the German Staats-Examen. 4. The subjects of examination are Anatomy, Physiology, Pathological Anatomy, Medicine, Surgery, Midwifery, Ophthalmic Surgery, and Pyschology. 5. A candidate may select one of these as the principal subject of examination. All the other subjects then become secondary. 6. The examination is oral and is conducted in the German language. 7. The written part of the examination consists of a medical dissertation in German or a scientific publication by the candidate, which must be given in before the oral examination. 8. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. If a State examination have been passed in the German Empire the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself; otherwise he is examined in five secondary subjects. Of these, three are fixed—Anatomy, Physiology, and Pathological Anatomy—the other two may be chosen by the candidate. 9. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes. 10. On the result of the entire examination, three notes are granted: *summâ cum laude, insigni cum laude, cum laude*. 11. When the diploma is delivered to the candidate by the Dean, he has to give his hand in promise that he will bear his academical dignity with honour. 12. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 *marks* (about £22 5*s*.), which must be paid before the commencement of the examination. Of this sum, if the oral examination be not passed, 179 *marks* (about £9) are returned.

The Medical Faculty consists of the following professors, with several teachers. *Ordinary Professors:* F. Kehrer, Midwifery; C. Gegenbaur, Human and Comparative Anatomy; W. Kühne, Physiology; O. Becker, Ophthalmic Surgery; Th. von. Dusch, Medicine; W. Erb, Medicine; J. Arnold, Pathology; V. Czerny, Surgery; C. Fürstner, Psychological Medicine. *Extraordinary Professors:* H. Oppenheimer, Materia Medica; S. Moos, Diseases of the Ears; F. Knauff, Forensic Medicine and Hygiene; H. Lossen, Surgery; A. Jurasz, Diseases of the Throat; G. Ruge, Anatomy; A. Ewald, Histology; J. Steiner, Physiology.

In connection with the University are a hospital, with medical, surgical, and ophthalmic clinics, an institution for diseases of the ear, a lying-in and gynæcological institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

UNIVERSITY OF JENA.

The Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions of which are as follow :—

1. A certificate equivalent to the 'maturity' certificate of a German Gymnasium must be presented. 2. A certificate must be given as to the extent of medical studies, and the time which has been spent in them (at least eight terms). 3. Satisfactory evidence must be given as to character from the neighbouring head office of police. 4. The student has to give in a written essay on any subject of medical science, chosen by himself, written in German. 5. Payment of examination and promotion fees must be made to the amount of 310 *marks* (about £15 10*s*.). If the examination be not passed, the promotion fees or 110 *marks* are returned. The examination is held in the German language only. It comprises all branches of Medicine—viz., Anatomy, Physiology, Histology, General Pathology and Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, Ophthalmology, and Hygiene. After the essay is printed the making out of the medical diploma takes place.

The Medical Faculty of this University is constituted as follows :—*Ordinary Professors :* F. Ried, Surgery ; Th. Riedel, Surgery ; B. Schultze, Obstetrics ; W. Müller, Pathology ; — Biedermann, Physiology ; M. J. Rossbach, Medicine ; H. Kuhnt, Ophthalmology ; A. Gürtner, Hygiene ; M. Fürbringer, Anatomy. *Honorary Professors :* M. Seidel, Materia Medica ; C. Bardeleben, Anatomy. *Extraordinary Professors :* P. Schillbach, Surgery ; C. Frommann, Physiology and Histology ; — Kessel, Diseases of the Ear ; O. Vierout, Diseases of the Skin and Syphilis ; — Engelhardt, Obstetrics and Gynæcology ; G. Binswanger, Psychiatry.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum ; anatomical, zoological, physiological, pathological, hygienic, physical, and chemical laboratories and museums, &c.

UNIVERSITY OF KIEL.

The following are the conditions for obtaining the medical degree:—1, The presentation, on application, of (*a*) *curriculum vitæ* ; (*b*) certificate of medical studies ; (*c*) a scientific treatise ; 2, a written examination ; 3, a verbal examination before the Faculty ; 4, payment of 360 *marks* (£18).

In this University the Medical Faculty consists of the following professors, with fourteen private teachers. *Ordinary Professors :* R. Werth, Obstetrics and Gynæcology ; F. von Esmarch, Surgery ; H. Quincke, Medicine ; V. Hensen, Physiology ; A. Heller, Pathology ; C. Völckers, Diseases of the Eye ; W. Flemming, Anatomy. *Extraordinary Professors :* J. Bockendahl, Forensic Medicine ; G. Edlessen, Medicine ; F. Petersen, Surgery ; A. Falck, Materia Medica ; B. Fischer, Hygiene.

There are a medico-chirurgical hospital, containing medical, surgical, gynæcological, and ophthalmic clinics, a lying-in institution, and laboratories and museum in connection with the several subjects taught.

UNIVERSITY OF KOENIGSBERG.

The Medical Faculty of this University consists of the following professors, with several private teachers. *Ordinary Professors :* L. Hermann, Physiology ; R. Dohrn, Obstetrics and Gynæcology ; — Stiedl, Anatomy ; E. Neumann, Pathology ; I. Mikulicz, Surgery ; — Lichtheim, Medicine ; J. Jacobson, Ophthalmic Surgery ; M. Jaffe, Medical Chemistry. *Extraordinary Professors :* A. W. Grünhagen, Histology ; S. Samuel, Therapeutics ; S. Pincus, Forensic Medicine ; E. Berthold, Diseases of the Eye and Ear ; F. R. A. Schneider, Surgery and Military Surgery ; J. Caspary, Diseases of the Skin and Syphilis ; J. Schreiber, Medicine ; O. Langendorff, Physiology.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics ; chemical and pharmaceutical laboratories, &c.

UNIVERSITY OF LEIPZIG.

The Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors :* F. Hofmann, Hygiene ; E. L. Wagner, Medicine ; — Credé, Midwifery ; F. V. Birch-Hirschfeld, Pathological Anatomy ; C. F. W. Ludwig, Physiology ; C. Thiersch, Surgery ; E. A. Coccius, Ophthalmic Surgery ; W. His, Anatomy ; C. W. Braune, Anatomy ; P. Flechsig, Psychiatry ; R. Boehm, Materia Medica ; F. A. Hoffmann, Medicine ; — Winkler, Chemistry. *Extraordinary Professors :* H. Sonnenkalb, Forensic Medicine and Hygiene ; J. V. Carus, Zoology and Comparative Anatomy ; A. Winter, Materia Medica ; C. Henning, Obstetrics ; C. H. Reclam, Forensic Medicine and Hygiene ; B. G. Schmid, Surgery ; E. F. Wenzel, Anatomy and Histology ; J. L. O. Heubner, Medicine ; E. R. Hagen, Otology ; A. R. Brenner, Diseases of the Nervous System ; E. Drechsel, Medical Chemistry ; F. L. Hessel, Dental Surgery.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories ; a zoological institute ; an anatomical institute, under the direction of Professor His ; a physiological institute, under Professor Ludwig ; and various clinics, &c.

UNIVERSITY OF MARBURG.

Any one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following : 1, a *curriculum vitæ* ; 2, a certificate of scientific studies ; 3, a certificate of at least four years' study at a recognised University or Medical College ; a dissertation in the German language. If these be considered satisfactory, the candidate is admitted to a *vivâ voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost of the diploma is 330 *marks* (£16 10*s*.).

The following are the professors in the Medical Faculty of this University. *Ordinary Professors:* H. Nasse, Physiology; W. Roser, Surgery; F. Ahlfeld, Midwifery; — Gasser, Anatomy; F. Marchand, Pathology; E. Mannkopff, Medicine; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology; E. E. Külz, Physiology; H. Meyer, Pharmacology. *Extraordinary Professors:* G. Wagener, Anatomy; H. Lahs, Midwifery; M. Rubner, Hygiene.

A hospital and various laboratories, &c., for practical instruction are connected with the University.

UNIVERSITY OF MUNICH.

IN granting medical degrees at this University a distinction is made between those candidates who have already passed a State examination at Munich, and those who have not. From candidates who have already passed a satisfactory German examination nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Faculty requires, however, the presentation of a dissertation, written in either the Latin or the German language. If the Faculty approve of it, it is printed at the expense of the candidate.

1. Candidates who have not passed the German State examination must present to the Medical Faculty the following:—*a*, a gymnasial certificate, or at least a certificate showing that the candidate has received a regular education; *b*, certificates of at least four years' attendance at a university or medical institution, and of attendance at lectures on the principal branches of Natural Science and Medicine; *c*, clinical certificates of the treatment of an internal, surgical, and eye complaint, and also assistance at a birth; *d*, a certificate of the performance of an operation on the dead body, and the application of a bandage. 2. The candidate must pass a two hours' verbal examination (in the German language) in Anatomy, Physiology, General Pathology, and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, and Diseases of the Eye. 3. The candidate has also to present a dissertation. 4. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers* (300 *marks*, 175 *florins*, £15).

The professorial staff of the Medical Faculty of this University is constituted as follows:—*Ordinary Professors:* R. Hertwig, Zoology and Comparative Anatomy; F. Seitz, Materia Medica; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; F. C. L. Winckel, Obstetrics and Gynæcology; J. N. von Nussbaum, Surgery and Clinical Surgery; A. von Rothmund, Ophthalmic Surgery; C. von Voit, Physiology; H. von Ziemssen, Medicine; C. von Kupffer, Anatomy; N. Rüdinger, Anatomy; O. Bollinger, Pathology; F. Bauer, Medicine. *Extraordinary Professors*: H. Ranke, Medicine; J. Amann, Midwifery; A. Martin, Forensic Medicine; J. Oertel, Laryngoscopy; O. Angerer, Surgery; H. Tappeiner, Medical Chemistry; K. Posselt; F. E. Bezold.

The University, which is situated in the Ludwig Strasse, contains a library consisting of 500,000 volumes. The chemical laboratory for Hygiene is under the direction of Professor von Pettenkofer.

UNIVERSITY OF ROSTOCK.

WHOEVER wishes to graduate in medicine at this University must apply to the Dean of the Medical Faculty, and deliver to him the following documents: 1, a certificate of having gone through the requisite course of studies in a university; 2, a certificate of examination, testifying to the ability of the candidate in the practice of medicine; 3, a treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty, of which two-thirds will be returned if the treatise be not deemed satisfactory. If proof of having passed a satisfactory examination in Germany be not given, the candidate is subjected to an examination, for which a sum of 200 *marks* must be paid. Only for special cases does the Faculty reserve a special form of examination. The inaugural dissertation must be the candidate's own, and he must append a written declaration to that effect. It is not, however, required that the work be composed entirely without assistance; but in this case the sources must be distinctly stated. After the dissertation has been stamped by the Dean in the name of the Faculty, it must be printed at the expense of the author, and at least 150 copies delivered to the Faculty. Promotions *in absentiâ* cannot be made, except only in the case of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following:—*Ordinary Professors:* T. Thierfelder, Medicine; H. R. Aubert, Physiology; F. Schatz, Obstetrics and Gynæcology; A. von Brunn, Anatomy; O. Nasse, Pharmacology; O. W. Madelung, Surgery; A. Thierfelder, Pathological Anatomy. *Extraordinary Professors:* J. Uffelmann, Medicine; Th. Gies, Surgery.

UNIVERSITY OF STRASBURG.

THE following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine:—

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions:—1. If he belong to the German Empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By a unanimous decision of the Faculty, one or two sessions may be omitted. Foreigners are not required to have passed through the four years' course if they produce proof of having received instruction equivalent to the course of study in a German Medical Faculty. 2. He must present a scientific essay composed by himself. 3. He must undergo the Faculty examination. 4. He must pay the prescribed fee of 300 *marks* (£15). The examination consists, as a rule, of an oral examination in all important departments of medicine. If the candidate fail to give satisfaction, he must, in order to obtain the degree of doctor, again undergo the examination after a time to be determined by the Faculty, but he is not required to present a second dissertation. In the case of candidates who have passed the State examination, a colloquy before three members of the Faculty may be substituted for the oral examination. Degrees in Medicine are not conferred on absent candidates. If the dissertation be rejected, the whole fee is returned. If the dissertation be approved, but the candidate fail in the examination, no part of the fee is returned to him; but when he is again admitted to examination, only half the fee is required. After the examination has taken place, and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma. The candidate has to bear the expense of printing the dissertation and the diploma, and 160 copies of the former must be delivered to the University authorities within six months after the examination. There is no public ceremony, and no oath is administered.

Any one desirous of matriculating as a student, and attending the lectures and other instruction given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University, in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then communicate with the Secretary of the University.

The following are the professors and teachers of the University:—*Ordinary Professors:* G. Schwalbe, Anatomy; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology; B. Naunyn, Medicine; A. Lücke, Surgery; W. A. Freund, Obstetrics and Gynæcology; F. Wieger, Diseases of the Skin and Syphilis; A. Aubenas, Obstetrics and Gynæcology; F. Jolly, Psychiatry; L. Laqueur, Diseases of the Eye. *Extraordinary Professors:* G. Kohts, Medicine and Diseases of Children; A. Kuhn, Diseases of the Ear; E. Fischer, Surgery; J. Stilling, Ophthalmology; J. von Mering, Medicine; A. Wolff; R. Ewald. There are also several *Docenten.*

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis and diseases of the skin.

UNIVERSITY OF TÜBINGEN.

THE Faculty of Medicine here grants a degree in Medicine under the following conditions:—

1. The candidate must send in with his application—*a*, a *curriculum vitæ*; *b*, a certificate of having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; *c*, proof of a sufficient study of medicine at a university, and certificates of having attended the lectures having reference to the subjects of examination. 2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medicine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentiâ.* 3. In the written examination one question will be put in each of the following subjects: 1. Anatomy; 2. Physiology; 3. Materia Medica; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to these, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery. 5. The fees, including the printing of the diploma, amount to 300 *marks*, which must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees are returned. If he be rejected after the verbal one, only half is returned. 6. The candidate must compose a dissertation, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers:—*Ordinary Professors:* P. Grützner, Physiology; J. von Säxinger, Obstetrics and Gynæcology; C. von Liebermeister, Medicine; P. Bruns, Surgery; T. von Jürgensen, Materia Medica; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy; E. Ziegler, Pathology. *Extraordinary Professors:* O. Oesterlen, Forensic Medicine and Hygiene; A. Froriep, Anatomy; G. Schleich, Ophthalmology; H. Vierordt, Medicine; C. Nauwerk, Pathology; — Wagenhäuser, Aural Surgery.

A hospital and institutions for practical instruction are connected with this University.

UNIVERSITY OF WÜRZBURG.

BEFORE being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must show—by testimonials or certificates—that he is of good moral character, and if he be a foreigner that he has received a scientific education equal to that of pupils passing out of a German gymnasium; he must also produce evidence that he has passed through four years' study at a University, six sessions of which must have been devoted to medical studies. Upon fulfilment of these conditions the candidate is admitted to a written and *vivâ voce* examination; before the latter he must pay to the Faculty 300 *marks* (£15). The written examination consists in the composition of an essay on some subject in theoretical or practical medicine, which must be handed to the Dean. If the report on the essay be unfavourable, admission to the *vivâ voce* examination is denied, and another essay can be composed and handed in at a future time. If the dissertation be approved by the Faculty, the candidate is admitted to a *vivâ voce* examination in the German language in the following subjects:—Anatomy and Pathological Anatomy, Physiology, Pathology, and Medicine, Special Therapeutics, Surgery, Obstetrics, and Ophthalmology. If the *vivâ voce* examination is satisfactory the candidate is admitted to the degree, and obtains his diploma as soon as he has delivered 160 printed copies of his dissertation. After taking the examination oath, the result of the examination is communicated to the candidate by the Dean with the qualifying remarks, 'very good,' 'good,' or 'moderate.' When the candidate is unsuccessful at the *vivâ voce* examination he is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more trial is, however, allowed after the first rejection at the *vivâ voce* examination. If the candidate is again unsuccessful, he, by the custom of the Faculty but not by law, has the last fee returned to him, only a few *marks* being retained for the officials.

In this University the Medical Faculty consists of the following professors, with several *Docenten*:—*Ordinary Professors:* A. von Kölliker, Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; A. Fick, Physiology; W. O. Leube, Medicine; G. E. Rindfleisch, Pathology; J. Michel, Ophthalmic Surgery; A. Geigel. Medicine and Hygiene; H. Grashey, Psychiatry. *Extraordinary Professors:* A. von Tröltsch, Aural Surgery; W. Reubold, Forensic Medicine; A. Kunkel, Materia Medica; P. Stöhr, Anatomy: F. Riedinger, Surgery; K. Rieger, Psychological Medicine.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

THE Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are—Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Pesth (Hungary), Klausenburg (Hungary), Prague (Bohemia)—which has two Medical Faculties, German and Tschek—and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practise medicine in the Empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters:* the others are summer *semesters.*) 1st *Semester:* Systematic Anatomy; Experimental Physics; Inorganic Chemistry; General Botany; Dissections. 2nd *Semester:* Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemical Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester:* Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester:* Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester:* General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester:* Pathological Anatomy (second part); Special Pathology; Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester:* Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology; Therapeutics, and Clinic; Diseases of the Eye; Exercises in Surgical Anatomy (Operations). 8th *Semester:* Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester:* Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynæcology; Forensic Medicine; (Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester:* Clinics of Diseases of Children; of Diseases of the Skin, and of Syphilis; (Obstetrics and Gynæcology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the Degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (*a*) his certificate of birth or baptism, and (*b*) evidence of having received a sufficient preliminary education in one of the institutions of the countries comprised in the Empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (*c*) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (*d*) of having passed, at one of the Universities of the Empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session; and of having passed the first examination.

The first examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination in Anatomy and Physiology, and a theoretical examination in all four subjects.

The second examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology, Pharmacology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside); and theoretically in all the subjects.

The third examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women, and Forensic Medicine. The examinations in Surgery, Ophthalmic Surgery, and Midwifery are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a president, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner; and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examination, he may present himself again at the end of four months; if again rejected, four months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may reappear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, either in practice or in theory, only with the sanction of the Minister of Public Instruction, and the consent of the College of Professors; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the Empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

UNIVERSITY OF VIENNA.

In this University the Medical Faculty is constistuted as follows:—*Ordinary Professors:* C. Toldt and E. Zuckerkandl, Anatomy; E. von Brücke, Physiology; H. Kundrat, Pathological Anatomy; S. Stricker, General and Experimental Pathology; A. Vogl, Pharmacology; O. Kahler and H. Nothnagel, Internal Medicine; Th. Billroth and E. Albert, Surgery; C. von Stellwag and E. Fuchs, Ophthalmic Surgery; C. von Braun and R. Chrobak, Midwifery and Gynæcology (for students); G. Braun, Midwifery (for midwives); H. Widerhofer, Diseases of Children; Th. Meynert and R. v. Krafft-Ebing, Psychiatry and Nervous Diseases; E. Hofmann, Forensic Medicine; E. Ludwig, Medical Chemistry; Th. Puschmann, History of Medicine. *Extraordinary Professors:* S. Schenk, Histology and Embryology; S. Exner and E. von Fleischl von Marxow, Physiology; S. von Basch, Experimental Pathology; A. Weichselbaum, Pathological Histology and Bacteriology; J. Seegen, Balneology; M. Benedikt, Electro-Therapeutics and Neuro-Pathology; S. Stern, Elementary Clinical Instruction; A. Drasche, Epidemiology; K. Störk and J. Schnitzler, Laryngology; L. von Schrötter, Laryngology and Internal Medicine: M. Rosenthal, Diseases of the Nervous System; E. von Staffella, Internal Medicine; L. Oser, Diseases of the Stomach and Intestines; W. Winternitz, Hydrotherapy; J. Weinlechner, F. Salzer, S. Hofmokl, and C. Böhm, Surgery; A. Politzer, J. Gruber, and V. Urbantschitsch, Aural Surgery; A. von Reuss and L. Mauthner (the latter with the title of Ordinary Professor), Ophthalmic Surgery; C. von Rokitansky and Bandl, Gynæcology; A. Monti, Diseases of Children: M. Kaposi, Dermatology; S. Neumann, Syphilis; H. Obersteiner, Psychiatry; M. Gruber, Hygiene; J. Mauthner, Medical Chemistry, A. von Mosetig-Moorhof, Surgery; T. Csokor, Veterinary Medicine. There are also about 68 *Privat-Docenten,* besides numerous adjuncts and assistants.

The General Hospital (*Allgemeines Krankenhaus*) is capable of accommodating about 2,000 patients. There are two medical clinics, under Professors Nothnagel and Kahler; two surgical clinics, one of which is under Professor Billroth; two clinics for Diseases of the Eye, under Professors von Stellway and Fuchs; and three clinics for Obstetrics, two for students being under the charge of Professors Carl Braun-Fernwald and Chrobak, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Chrobak. There are also special clinics for Syphilis, under Professor Neumann; for Laryngoscopy, under Professors von Schrötter and Störk; for Diseases of Children, under Professor Widerhofer; for Psychology, under Professors Meynert and Krafft-Ebing; and for Otology, under Professors J. Gruber and Politzer. A considerable portion of the school is also situated within the hospital: thus there are the Pathological Museum and *post mortem* room, under the direction of the Professor of Pathology; the room for medicolegal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Professor Toldt and his colleague; the Physiological Institute, where Practical Physiology is carried on under Professor Brücke; the Materia Medica Museum and the Medical Library are outside the hospital, in the new University Building.

The great clinics on Medicine, Surgery, &c., are conducted during the two sessions—from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Hospital (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Asylum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstädt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), &c.

UNIVERSITY OF CRACOW.

The Medical Faculty of this University consists of the following professors, with several *Docenten:*—*Ordinary Professors:* E. Korczynski, Medicine; L. Teichmann, Descriptive Anatomy; M. Madurowicz von Jelita, Midwifery and Gynæcology; L. Rydel, Ophthalmic Surgery; A. Stopczanski, Medical Chemistry; A. Adamkiewicz, Pathology; L. Blumenstok, Forensic Medicine; T. Browicz, Pathological Anatomy; N. Cybulski, Physiology; A. Rosner, Dermatology and Syphilis; J. Lazarski, Pharmacology; Dr. Rydygier, Surgery. *Extraordinary Professors:* J. Oettinger, History of Medicine; M. L. Jakubowski, Diseases of Children; S. Domanski, Diseases of the Nervous System; A. Obalinski, Surgery; S. Parenski, Medicine; P. Pienazek, Laryngology; W. Jaworski, Medicine. There are also several *Privat-Docenten* and assistants.

UNIVERSITY OF GRATZ.

In this University the Medical Faculty consists of the following professors, with about twelve *Docenten: Ordinary Professors:* A. Schauenstein, Forensic Medicine; E. Holl, Anatomy; A. Wölfler, Surgery; G. von Helly, Midwifery and Gynæcology; A. Rollett, Physiology and Histology; I. Schnabel, Ophthalmic Surgery; O. Rembold, Medicine; J. Eppinger, Pathological Anatomy; C. von Schroff, Materia Medica and Therapeutics; C. B. Hoffmann, Medical Chemistry; O. Drasch, Histology and Embryology; R. Klemensiewicz, Pathology and Therapeutics. *Extraordinary Professors:* J. von Koch, Epidemic Diseases and Sanitary Police; E. Lipp, Diseases of the Skin; E. Borner, Obstetrics and Gynæcology.

Connected with the University are anatomical, physiological, pathological, and zoological institutes; medical, surgical, ophthalmic, obstetric, and gynæcological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, &c. The hospitals are the general hospital (700 beds), a lying-in hospital (120 beds), the town hospital (80 beds), a children's hospital (80 beds), and two infirmaries (245 beds).

UNIVERSITY OF INNSBRÜCK.

The following professors belong to the Medical Faculty:—*Ordinary Professors:* A. von Tschurtschenthaler, Materia Medica and Therapeutics; M. Holl, Anatomy; E. Ehrendorfer, Obstetrics and Gynæcology; J. Moeller, General Pathology and Pharmacology; M. von Vintschgau, Physiology; F. Schott, Pathological Anatomy; C. Nicoladoni, Surgery; P. von Rokitansky, Medicine; W. Löbisch, Medical Chemistry. *Extraordinary Professors:* F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology.

The ordinary laboratories, clinics, and other means of practical instruction are possessed by this University. There are a general hospital (204 beds) and a lying-in hospital (130 beds).

UNIVERSITY OF PRAGUE.

The Medical Faculty of this University consists of the following professors, with several *Docenten:— Ordinary Professors:* A. Pribram, Medicine; C. Gussenbauer, Surgery; H. Sattler, Ophthalmic Surgery; Ph. Knoll, Pathology; J. Maschka, State Medicine; O. Kahler, Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; — Schauta, Obstetrics and Gynæcology; H. Chiari, Pathology; F. Hofmeister, Pharmacology; C. Rabl, Anatomy; A. Pick, Psychiatry; S. Mayer, Physiology. *Extraordinary Professors:* J. Lerch, Chemistry; F. Ganghofner, Diseases of Children; P. J. Pick, Skin Diseases and Syphilis; E. Zaufal, Aural Surgery; C. Weil, Surgery; A. Epstein, Diseases of Children; J. Soyka, Hygiene; W. Biedermann, Physiology; J. Janosik, Histology and Embryology; A. Schenkl, Ophthalmic Surgery; — von Jirus, Pharmacology; K. Pawlik, Midwifery and Gynæcology.

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic, and dermatological clinics; obstetric clinics for practitioners and for midwives, &c. The hospitals are the General Hospital (948 beds), with the affiliated Hospital of the Bohemian Sisters (220 beds), the Franz-Josef Children's Hospital (100 beds), the Israelite General Hospital (52 beds), the Hospital of the Brothers of Mercy (166 beds), the Hospital of the Elizabethan Sisters (60 beds), the Public Lunatic Asylum (1,348 beds), the Lying-in Hospital (322 beds for mothers and 176 for children).

UNIVERSITY OF BUDA-PESTH.

The Medical Faculty consists of sixteen ordinary, fifteen extraordinary professors, and thirty-four *privatim docentes.* Among the former are Drs. Mihalkovics, Anatomy; Kétly and Korányi, Internal Medicine; Kovacs and Lumnitzer, Surgery; Scheuthauer, Pathological Anatomy; J. Schulek, Ophthalmology; Kezmarszki and Tauffer, Midwifery; Ajtai, Forensic Medicine; Fodor, Hygiene; Jendrassik, Physiology. Among the extraordinary professors are Drs. Navratil, Laryngology; Böke, Diseases of the Ear; Schwimmer, Dermatology; Antal, Diseases of the Urinary Organs; Laufenauer, Psychiatry.

SWITZERLAND.

GRADUATION IN MEDICINE.

In Switzerland degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practise, for which a separate examination is required.

UNIVERSITY OF BASLE.

The degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained under the following conditions:—

1. Application for admission to the examination must be made to the Dean of the Faculty in writing, enclosing: (*a*) *curriculum vitæ*; (*b*) matriculation at the University; (*c*) certificates of attendance at the academical lectures; (*d*) a certificate of conduct from the High School in which the candidate has made his principal studies; (*e*) a scientific treatise on any subject in medical or natural science. 2. The examination is partly written (*tentamen*) and partly verbal (*rigorosum*). 3. The written examination consists in the answering of five questions in Anatomy, Physiology, Pathology, Medicine, and Surgery. 4. In case of rejection, the Faculty can appoint a time for a repetition of the examination. 5. All the professors of the Faculty are invited to the verbal examination. The following are the subjects: Anatomy, Physiology, Pathology, Medicine, Materia Medica, Surgery, and Midwifery. 6. The examination by one examiner must not last longer than half an hour. 7. The degrees in which doctorships are granted are *Summâ cum laude*, *Insigni cum laude*, *Magnâ cum laude*, *Cum laude*, and *Rite.* 8. In adjudicating on both the written and the verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of general scientific knowledge, and especially a comprehensive knowledge of Natural Science. 9. Two hundred and twenty copies of the treatise must be delivered to the Faculty. 10. Promotions are not granted to applicants who have not passed the examinations here, but the Faculty can confer the degree of Doctor *honoris causâ.* 11.

The fees for the examination amount to 350 *francs*—viz., 100 for the *tentamen*, 200 for the *rigorosum*, and 50 for the promotion. 12. If the candidate be rejected after either examination, he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University:—*Ordinary Professors:* L. Rütimeyer, Comparative Anatomy and Zoology; A. Socin, Surgery; H. Immermann, Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynæcology (does not lecture); F. Miescher, Physiology; M. Roth, Pathology; L. Wille, Psychiatry; H. Schiess, Ophthalmic Surgery; G. Bünge, Physiological Chemistry; H. Fehling, Obstetrics and Gynæcology; E. Hagenbach-Burckhardt, Diseases of Children. *Extraordinary Professors:* I. Hoppe, Therapeutics; E. Hagenbach-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing; Le Courvoisier, Surgery. There are also ten private teachers.

Connected with the University are the town hospital, where clinics for medicine, surgery, diseases of the eye, mental diseases, and midwifery are conducted; a hospital for diseases of children, and institutions for practical instruction in physiology, pathology, chemistry, and botany.

UNIVERSITY OF BERNE.

BEFORE admission to examination for the degree in Medicine and Surgery, the candidate must submit to the Faculty of Medicine a manuscript dissertation of scientific value. If this be accepted, he must, after producing evidence of general, scientific, and medical education, be examined *vivâ voce* in Anatomy, Physiology, Pathological Anatomy, Legal Medicine, General Pathology and Medicine, Surgical Pathology and Surgery, Materia Medica, and Ophthalmology.

The Medical Faculty of this University is constituted of the following professors and about thirteen *Docenten:*—*Ordinary Professors:* C. Emmert, Forensic Medicine and Hygiene; T. Kocher, Surgery; T. Langhans, Pathological Anatomy; — Sahli, Medicine; P. Müller, Obstetrics and Gynæcology; A. Vogt, Hygiene; E. Pflüger, Ophthalmic Surgery; M. von Nencki, Physiological Chemistry; H. Kronecker, Physiology; R. Demme, Pharmacology and Diseases of Children. *Extraordinary Professors:* A. Valentin, Aural Surgery. Professor R. Schärer having been compelled in the spring of 1889 to resign his professorship of psychiatry, Dr. von Speyr provisionally has charge of the clinical course. There are several private teachers.

Medical, surgical, obstetric, and special clinics, and physiological, pathological, and clinical laboratories, &c., are connected with the University.

UNIVERSITY OF GENEVA.

THE University of Geneva grants the degrees of Bachelor in Medical Science and Doctor of Medicine. The following are the regulations as to examinations and degrees in the Faculty of Medicine approved by the Swiss Conseil d'État by decree dated August 31, 1888:—

The following classes of persons are admitted to matriculate as students in the Faculty of Medicine: 1. Those who have obtained the 'maturity' certificate from one of the Sections of the Geneva Gymnasium; 2. Bachelors in Letters and Bachelors in Science of the University of Geneva; 3. Persons who by the possession of certificates or diplomas can prove that they have gone through an equivalent course of study. In addition to these, persons who can show that they have been for at least one session regular students in the Medical Faculty of another University can matriculate in the Geneva Faculty of Medicine. This, however, does not give them the right to present themselves for degrees until they have fulfilled the conditions just mentioned.

The following are the conditions for obtaining the degree of Bachelor in the Medical Sciences. Two examinations must be passed, neither of which can be divided. Only matriculated students of the Faculty can present themselves for the first examination. Candidates must also produce evidence of having done practical work for at least one session in a chemical laboratory. Before being admitted to the second examination, candidates must have passed the first. They must also furnish evidence of having gone through a complete course of dissections, and of having done practical work for at least one session in a microscopical laboratory. The Board of Examiners may, with the sanction of the Faculty, exempt from the first examination candidates who by the possession of certificates or diplomas can prove that they have gone through equivalent courses of study, but in no case can the second examination be modified. The first examination is *vivâ voce*, and includes physics, chemistry, botany, zoology, and comparative anatomy—two questions being set in each of these four branches. The subjects of the second examination are: 1. Anatomy (*a*) demonstration of a preparation made by the candidate for which four hours are allowed; (*b*) *vivâ voce* questions. 2. Histology and Embryology; (*a*) demonstration of one or more histological preparations made by the candidate, for which one hour is allowed; (*b*) *vivâ voce* questions. 3. Physiology; an examination (*a*) in writing, for which two hours are allowed, and (*b*) *vivâ voce.* A fee of 25 *francs* is paid on entering for each examination. In case of failure half the fee is returned.

For the Degree of Doctor of Medicine only the following persons can present themselves: 1. Bachelors in Medical Science of the University of Geneva; 2. Persons who by the possession of diplomas or certificates can prove that they have gone through a course of study judged by the Faculty to be equivalent; 3. Persons who have passed the Swiss Federal professional examination. Three examinations must be passed. The following are the subjects of the first: Internal Pathology; Psychiatry; External Pathology; Operative Surgery—two operations; Hygiene—(*a*) written examination, for which two hours are allowed; (*b*) *vivâ voce*; Forensic Medicine—(*a*) a medico-legal report on a case, or on given data, for which three hours are allowed; (*b*) *vivâ voce*; Materia Medica and Therapeutics. The subjects of the second examination are: 1. Morbid Anatomy and General Pathology, including a *post mortem* examination, for which one hour is allowed, histological preparations, for which half an hour is allowed, and *vivâ voce* questions. 2. Clinical Medicine, including the examination of a patient, with a written consultation, for which two hours are allowed, and examination of a patient with oral discussion. 3. Clinical Surgery, including the examination of a patient, with written consultation, for which two hours are allowed; the examination of a patient, with oral discussion, and the application of bandages. 4. Midwifery and Diseases of Women, including the examination of an obstetrical or gynæcological case with oral discussion, and Midwifery with manipulations on the 'dummy.' 5. Practical examination in Ophthalmology. The third examination consists in the presentation of a thesis in French, German, or Italian, on a subject chosen by the candidate. This thesis is approved by the Faculty on the written report of a Jury appointed by it. The candidate will receive the title and diploma of Doctor only after his dissertation has been printed. One hundred and fifty copies of it must be deposited with the University authorities. The length of the *vivâ voce* examination is twenty minutes for each examiner. On entering for each of the two first examinations the candidate has to pay a fee of 50 *francs*, which is handed over to a fund for the creation of prizes of the Faculty of Medicine. In case of failure half of the fee is returned. On entering for the third examination a fee of 200 *francs* has to be paid. A report of each examination is laid before the Dean. If the candidate is rejected, the Dean on the advice of the Jury decides when he can be readmitted to examination. The time can in no case exceed one year. Three rejections at any one examination make those previously passed null and void. Candidates for the Degree of Doctor of Medicine, who have obtained the federal diploma, if they have received the marks 'Very good' or 'Good,' are exempted from the examinations and are only required to present a thesis. If they have received a lower mark than 'Good' they must undergo a further examination in the subjects in which they have shown themselves relatively deficient at the Federal Examination. The nature of such examination is determined by the Faculty. In both cases before being allowed to present his thesis the candidate must pay a fee of 250 *francs*. In case of failure half is returned.

The professorial staff consists of the following :— *Ordinary Professors:* S. L. Laskowski, Anatomy; M. Schiff, Physiology; F. W. Zahn, Pathology; L. Revilliod, Clinical Medicine; G. Julliard, Clinical Surgery; A. H. Vaucher, Clinical Obstetrics and Gynæcology; M. Olivet, Pyschiatry; F. Vuilliet, Polyclinic; A. D'Espine, Medicine; J. L. Reverdin, Surgery and Practical Surgery; J. L. Prevost, Therapeutics; P. L. Dunant, Hygiene; — Gosse, Forensic Medicine; — Brun, Materia Medica and Pharmacology. *Supplementary Professors:* — Éternod, Histology; — Jentzer, Obstetrics; A. Reverdin, Surgery; H. Oltramare, Venereal Diseases.

UNIVERSITY OF ZÜRICH.

THE following are the regulations for the degree of Doctor of Medicine :—

1. In order to obtain the degree of Doctor of Medicine the candidate must send to the Dean a written memorial, accompanied by (*a*) evidence of attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects; (*b*) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the Dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance. If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is accepted if two-thirds give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the oral examination. This examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The votes of two-thirds of the members of the Faculty present are necessary for the passing of this examination.

4. After the examination has been passed and 160 printed copies of the dissertation have been delivered, an official diploma is delivered in duplicate to the candidate.

5. The fee consists of 405 *francs* (a little more than £16), and 15 *francs* to the beadle; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitively rejected. The sum of 100 *francs* is remitted to candidates who already possess a recognised diploma; and, in such cases, the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

6. The Faculty has the power of granting the diploma of Doctor *honoris causâ* for distinguished services to medicine.

The Medical Faculty consists of the following Professors, with several *Docenten* :—*Ordinary Professors:* Ph. Stöhr, Human Anatomy; H. Frey, Comparative Anatomy and Histology; U. Krönlein, Surgery; J. Gaulé, Physiology; E. Klebs, Pathology; H. Eichhorst, Medicine; O. Haab, Ophthalmic Surgery; O. Wyss, Hygiene and Diseases of Children; Th. Wÿder, Obstetrics and Gynæcology; A. Forel, Psychiatry. *Extraordinary Professors:* H. Spöndly, Obstetric Medicine; J. Billeter, Diseases of the Teeth; F. Goll, Materia Medica.

THE SWISS FEDERAL DIPLOMA.

THE following are the conditions for obtaining the Swiss Federal diploma in Medicine. Three examinations must be passed. 1. Natural Science, including *vivâ voce* questions in Physics, Chemistry, Botany, Zoology and Comparative Anatomy. For admission to this examination certificates are required of having passed an examination in subjects of general education, of having attended lectures on all the subjects of the examination, and of having worked practically at qualitative and elementary quantitative analysis in a chemical laboratory. 2. Anatomy and Physiology, including practical and *vivâ voce* tests. In the former the candidate must make and explain an anatomical preparation, for which four hours are allowed, and he must give explanations of other preparations which are submitted to him, and answer questions on Anatomy; he must make and explain histological preparations, and write an essay on some subject in Physiology with closed doors. The *vivâ voce* part consists of questions on Anatomy, Histology and Embryology, and Physiology. Before admission to this examination the candidate must have passed the first examination, must have attended lectures on Anatomy, Histology, Embryology, and Physiology, and must have dissected during two sessions, and worked with the microscope. 3. The 'Professional' Examination also consists of a practical (including written questions) and a *vivâ voce* part. The following are the subjects of the practical examination:—1. Morbid Anatomy, including the *post mortem* examination of at least one of the great cavities of the body, with questions thereon, and the demonstration with the microscope of one or more pathological preparations, with questions relative thereto. 2. Pathology and Therapeutics, including the analysis of a case of disease submitted to the candidate, and the composition at the same sitting of a complete history of the disease. Six hours at the outside are allowed for this test. If this is unsatisfactory, a second test of the same kind must be undergone. The candidate has also to examine one or more patients and to answer *vivâ voce* questions on the cases. 3. Surgery and Surgical Anatomy, including tests similar to those just described, with the addition of at least two operations on the dead body, with questions on the anatomy of the parts and on Operative Surgery. 4. Midwifery, including the analysis of an Obstetrical or Gynæcological case, with questions thereon, and the diagnosis on the 'dummy' of the various positions of the fœtus, and the performance of one or more obstetrical operations, also on the 'dummy,' with questions as to prognosis, the theory of instruments, &c. 5. Ophthalmology, including the examination of cases, and *vivâ voce* questions. 6. Forensic Medicine and Hygiene, including (*a*) a written essay (analysis and report) on a medico-legal case, which may be fictitious, and on different cases of mental disease; (*b*) a written essay on a subject of hygiene. The oral part of the examination includes questions on General Pathology and Morbid Anatomy, Special Pathology and Therapeutics, including Diseases of Children, Surgery, Midwifery, including Gynæcology, Hygiene, Forensic Medicine, Psychiatry, Materia Medica. The conditions for admission to this examination are the following:—The candidate must have passed the examination in Anatomy and Physiology, or one recognised as equivalent thereto by the Committee of Direction; he must have attended lectures on the following subjects, at least—General Surgery, General Pathology, Morbid Anatomy, Hygiene, Forensic Medicine, and Pharmacology; he must have attended medical practice during at least two sessions, clinical surgery and clinical midwifery for a like period, clinical ophthalmology and clinical psychiatry during one session; he must have gone through a course of surgical operations, a course of obstetrical operations, and a course of *post mortem* examinations. The regulations for the examination for the Swiss Federal diploma in medicine have been given in detail on account of their special interest at the present time for practitioners with British qualifications who may wish to practise their profession in Switzerland. The examinations are held at Bâle, Berne, Geneva, Lausanne, and Zurich. They confer the licence to practise medicine in all parts of the Republic. The fees payable are as follow:—First examination, 20 francs; second, 30 francs; third, 120 francs. Foreigners pay double these fees in the absence of any treaty to the contrary.

DENMARK.

MEDICAL EDUCATION AND GRADUATION.

THE study of Medicine at the University of Copenhagen is open to any student who has matriculated there or in foreign Universities; but only Danish subjects can obtain through examination the right to practise as medical men in the country.

The course of study lasts six or seven years. It is divided into three parts—namely, an introductory and two principal courses.

1. The introductory part consists of Botany (with especial regard to medicinal plants), Physics, Zoology, and Chemistry, theoretical and practical. The student has to submit to a preliminary examination on these subjects, and he can then enter as a pupil at one of the hospitals, where he must attend in a fixed order, and for a certain time, in the various wards.

2. The second course comprises Anatomy, Physiology, Pharmacology, and Dissections, in which the student has to submit to an examination.

3. The final course consists of the following: Theoretical Surgery, Clinical Surgery, Operative Surgery, Theory of Medicine, Clinical Medicine, Pathological Anatomy, General Pathology, Forensic Medicine, and Obstetric Medicine. The student is examined on these subjects, and has to present a written thesis in Medicine, and one on Surgery. Before the student can pass his examination in this concluding course, he must present a certificate showing that he has gone through a half-yearly clinical course of study under the chief physicians at the hospital in Surgery, Medicine, Skin Diseases, and Syphilis; and a shorter course at the Lying-in Institution in Obstetrics and Diseases of Children.

When these examinations are passed, the obligatory course of study is concluded by a residence at the Lying-in Institution, in order to obtain a practical knowledge of operations in cases of abnormal labour. The candidate who has passed his examination has now a right to practise medicine; but the majority of candidates, before commencing to practise, endeavour to obtain an appointment at one of the hospitals, where they do duty during two years in a subordinate position. The entire course of study generally covers a period of from six to seven years.

In order to obtain the degree of Doctor of Medicine, the candidate has to prepare and submit to the Medical Faculty a treatise on a medical subject chosen by himself. If it be accepted by the Faculty, it is printed, and must be defended by the author publicly at the University, when at least two professors of the Medical Faculty appear as opponents.

Among other means for aiding the labours of the student at the University are: The Botanical Gardens, a Zoological Museum, a Chemical Laboratory, a Collection of Physical Instruments, an Anatomical Museum, Dissecting Rooms (Physiological Collection and Laboratory), Pharmacological Collection, Collection of Surgical Instruments, Pathological Museum, the Copenhagen Hospitals, and the Lying-in Institution. A Bacteriological Laboratory, under the direction of Dr. Salomonsen, has been established in Copenhagen.

No entrance fees are demanded, and all the lectures are free to the students. The fees payable in respect of the several examinations amount in all to 60 *kroner* (about £3 10*s*.). The expenses in connection with obtaining the degree of Doctor of Medicine amount to 160 *kroner* (about £9).

SWEDEN.

MEDICAL EDUCATION.

THERE are three medical institutions in Sweden which confer licences to practise, namely, the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute or Academy of Medicine in Stockholm. The Universities also confer the degree of Doctor of Medicine. A Medical School, with professors of the various branches of medical science, is connected with each.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, physiological and pathological laboratories, &c.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic, and obstetric cases.

At Lund, clinical instruction is given in the State Hospital and also in the University Hospital. In the latter, there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction. The obstetric department is also clinical. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in Hospitals, the Town and State Lock, Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynæcological ward. The Hospital contains about 300 beds. An ophthalmic clinic is comprised in the surgical department; and the gynæcological clinic is attached to the medical.

The Lying-in Hospital or Obstetric Clinic can accommodate 30 patients; 20 beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex officio* chief physician.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution is from 100 to 200; sometimes it has been as high as 240. Of these, 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which, on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds which are all available for clinical instruction. The professor of psychological medicine in the Karolina institute is the chief physician.

LICENCE AND DEGREE IN MEDICINE.

NO one can practise Medicine in Sweden who has not obtained a Licence from one of the three Boards. The examinations for the Licence consist of two parts. The first, for the Diploma of Candidate in Medicine, embraces Anatomy, Histology, Physiology, Embryology, Medical Chemistry, Pharmacology, Toxicology, General Pathology, and History of Medicine. The candidate must, after passing the maturity examination on leaving a lyceum, have undergone a preliminary (medico-philosophical) examination in Botany, Zoology, Chemistry, and Physics, or have passed an examination as candidate in Philosophy. He must also have followed the practical laboratory courses of Chemistry, Physiology, and normal and morbid Anatomy. The examination for the Licence comprises Medicine, Diseases of the Skin and Syphilis, Diseases of Children, Surgery, Obstetrics, and Gynæcology, Psychiatry, Pathological Anatomy, and Forensic Medicine. The candidate must have passed the examination for candidate in Medicine, and must subsequently have attended the clinics of Medicine, Surgery, Obstetric Medicine, Diseases of Children, Syphilis, and Diseases of the Mind; and must have obtained a competent knowledge of Pharmacy. Attendance on oral lectures is not obligatory.

The degree of Doctor of Medicine is conferred by the Universities of Lund and Upsala on Licentiates of those Universities and of the Academy at Stockholm on their presenting and defending a thesis. Attendance on lectures is obligatory for the degree.

NORWAY.

MEDICAL EDUCATION.

IN the University of Christiania, which is the only School of Medicine in Norway, lectures are delivered on the following subjects: Surgery, Ophthalmic Surgery, Physiology, Midwifery, and Diseases of Women and Children, Descriptive Anatomy and Embryology, Forensic Medicine, Pathology, and Therapeutics, Hygiene, Materia Medica, General Pathology and Pathological Anatomy, Surgical Pathology, Zoology, Botany, and Chemistry. Clinical instruction is given in the General Hospital on Surgery, Ophthalmic Surgery, Medicine, Diseases of the Skin and Syphilis; at the Lying-in and Children's Hospital, on the Diseases of Women and Children; at the Gaustad Asylum on Mental Diseases; and in the Town Hospital, on Chronic Diseases. Practical instruction is also given in Chemistry, Anatomy, and Histology.

LICENCE AND DEGREE.

BEFORE entering on the study of Medicine, the candidate has to pass two preliminary examinations; one in Arts, including Norwegian, Latin, Greek, French, German, English, Mathematics, Physics, and History; or instead of Latin and Greek he can choose Natural Sciences, English, and Mathematics; having passed this, he is admitted to matriculation as student at the University; and one in Philosophy, including Zoology or Botany, Astronomy, and the elements of Chemistry and

Physics and Philosophy, or instead of the Natural Sciences he can choose different languages. Having passed these, he is admitted to study Medicine for nearly seven years.

There are three professional examinations. The first is held two and a half years after matriculation, in Anatomy, Dissections, the use of the Microscope, Physiology, Medical Physics, Botany, Zoology, and Chemistry. The second, held three and a half years after the first, includes Pharmacology, Toxicology, Medicine, Therapeutics, General Pathology, Pathological Anatomy, Surgery, Ophthalmic Surgery, Diseases of the Skin, and Syphilis. The third, held six months or a year after the second, includes Operative Surgery, Obstetrics and Gynæcology, Diseases of Children, Forensic Medicine, Hygiene, and a practical examination in Medicine and Surgery. Practical work in the hospital wards is also obligatory.

On passing the final examination, the candidate becomes a Physician, and obtains the right to practise. To obtain the degree of Doctor, he must pass a further examination, and defend a thesis.

HOLLAND.

MEDICAL EDUCATION AND GRADUATION.

The degree of Doctor of Medicine is granted in Holland by the Universities of Leyden, Groningen, and Utrecht, and the Communal University of Amsterdam.

In each of the four towns there are a hospital and laboratories of Physics, Chemistry, Botany, Zoology, Anatomy, Physiology, Experimental Pathology, and Pharmacy; and, in Amsterdam, laboratories of Hygiene and Pathological Anatomy.

A candidate for admission as student of Medicine must have passed one of the following examinations:—1, a Literary and Mathematical Examination (Mathematics, Dutch, French, German, and Elementary Latin); 2, an examination for admission to a University (Mathematics, Dutch, Latin, and Greek); or, 3, he must have gone through in a satisfactory manner the classes of a Latin school (Mathematics, Geography, History, Latin, Greek, Dutch, French, German, and English). Those only who belong to Classes 2 and 3 are admissible to the degree of Doctor of Medicine.

In the University the following three examinations have to be passed—the first two years after entrance, and the others at further intervals of two years:—1, Botany, Zoology, Chemistry, and Physics; 2, Anatomy, Physiology, Histology, Pharmacology, and General Pathology; 3, Internal Pathology, Surgery, Obstetrics, Pathological Anatomy, Pharmacodynamics, and Hygiene. The candidate must also present a thesis.

The Faculty grants the degree of Doctor of Medicine to those who have passed the three examinations, and who have shown at the time of admission that they possess a competent knowledge of Latin and Greek. The degree does not confer a right to practise.

STATE EXAMINATION.

This examination is conducted by eight professors, appointed annually and paid by the Government. The applicant for admission must be a Doctor of Medicine of some University, or possess a certificate of gymnasial maturity, or pass a preliminary literary and philosophical examination. The course of medical study must extend over at least six terms. The medical examination includes General and Special Pathology, Pharmacology, Morbid Anatomy, Medical Jurisprudence, Clinical Medicine, Clinical Surgery, and Obstetrics.

BELGIUM.

GRADUATION IN MEDICINE.

Degrees in Medicine are granted by the Universities of Brussels, Ghent, Liège, and Louvain. The degrees, when legalised by a Government commission, give the right of practice in Belgium. The Universities of Brussels and Louvain confer also honorary titles, without licence to practise.

The examinations for the degree of Doctor of Medicine are alike in the four Universities. 1. An examination in Natural Science must be passed before the Faculty of Science. It comprises Chemistry, Physics, Botany, Zoology, Elements of Mineralogy and Geology, Logic, Psychology, and Moral Philosophy (all oral), and Practical Chemistry. This examination may be passed either entire or in two divisions. 2. An examination for candidates in Medicine must be passed, either entire or in two divisions, before the Faculty of Medicine. It comprises Descriptive Anatomy, Histology, Physiology, including Embryology, Elements of Comparative Anatomy, and Materia Medica, with Dissections and Practical Histology. 3. There are three further examinations for the Doctorate: *a.* an examination (entire or in two divisions) in Medicine, General Therapeutics and Pathology, Pathological Anatomy, Hygiene, and Practical Pathological Histology; *b.* an examination in Surgery, including Ophthalmic Surgery, Obstetrics, and Forensic Medicine; *c.* a clinical examination in Medicine, Surgery, and Midwifery, and a practical examination in Regional Anatomy and Operative Surgery.

The total duration of study is seven years. The law, however, only requires that the student shall have attended hospital practice for three years.

Every student, at the beginning of the year, takes out an inscription, for which he pays 15 *francs*. For the courses required for each of the five examinations a fee of 200 *francs* is paid. The examination fees are: for the first two examinations, each 40 *francs*; for each of the three examinations for the doctorate, 80 *francs*.

UNIVERSITY OF BRUSSELS.

Degree for Foreign Practitioners.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are: for inscription of name, 215 fr. (£8 12*s.*); for examination, 315 fr. (£12 12*s.*); for registration of diploma, 10 fr. (8*s.*); total, 540 fr. (£22 12*s.*). The examination consists of three parts. 1. General Therapeutics, including Pharmacodynamics (proportion of doses), special Pathology and Therapeutics of Internal Diseases, General Pathology and Pathological Anatomy. 2. Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the mannikin; Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, &c.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

The examinations take place on the first Tuesday in November, December, February, May, and June, and are conducted *vivâ voce.* Candidates are requested to attend at the University at the latest at 2 P.M. on the day preceding the examination for the purpose of paying their fees and depositing their diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English, through the medium of an interpreter, for such candidates as are not familiar with the French language. Most of the examiners, however, speak English well.

UNIVERSITY OF LOUVAIN.

THE degree of M.D. may also be obtained from this University without residence or preliminary examination in Arts, by foreigners who have already a University degree in their own country, or who are able to satisfy the medical faculty as to the genuineness and value of their diplomas. The examination, which is a severe one, is conducted in French, no interpreter being allowed. The examination consists of four parts, which have to be successively passed in all the subjects prescribed for the 'candidateship' and for the Doctorate in Medicine, Surgery, and Midwifery, viz.: 1. Anatomy, naked eye and microscopic, with practical tests, Comparative Anatomy, Physiology, Embryology, and Materia Medica; 2. Medical Pathology, both general and special, Pharmacodynamics and Therapeutics, Pathological Anatomy, with practical test; 3. Surgical Pathology, Midwifery, Hygiene, and Forensic Medicine; 4. Practical examinations in Clinical Medicine, Surgery, Midwifery, Ophthalmology, and Operative Surgery. In addition to these various tests, the candidate has to present a dissertation which he must defend in public, together with twelve theses annexed thereto. The fee is about £22. This examination does not give a right to practise in Belgium, to obtain which additional tests must be passed, and residence at Louvain is also necessary.

The Medical Faculty consists of the following Professors, with several *Professeurs agrégés*:— Comparative Anatomy, P. J. Van Beneden; Physiology, E. Masoin; Histology, E. Venneman; Medicine, G. Verriest; Surgery, T. Debaisieux; Pathology, F. J. M. Lefebvre; Gynæcology, E. Hubert; Chemistry and Pharmacology, G. Bruylants; Anatomy, C. Ledresseur; Pathological Anatomy and Bacteriology, J. Denys; Forensic Medicine, E. Hayoit.

RUSSIA.

GRADUATION IN MEDICINE.

DEGREES in Medicine are granted by eight universities in Russia—namely, those of Moscow, Kieff, Kasan, Charkoff, Odessa, Warsaw, Dorpat, and Helsingfors; also by the Medico-Chirurgical Academy of St. Petersburg. Students are admitted after having gone through an eight years' course of instruction in a gymnasium, and having passed the *Abiturientem-Examen.* The ordinary age for commencing medical studies is 19.

The course of medical study extends over five years. The mode of instruction and the regulations are nearly alike in the several universities. The session usually begins on Sept. 1, and terminates at the end of May. The remaining three months constitute the vacation. The course of study is as follows:—

First Year: Descriptive Anatomy, with Dissections; Inorganic Chemistry; Experimental Physics; Botany; Mineralogy; and Zoology.

Second Year: Descriptive Anatomy, with Dissections; Physiology; Histology; Comparative Anatomy; Organic and Practical Chemistry; Botany; Materia Medica; and Experimental Physics.

Third Year: Pathological Anatomy and Histology, with necropsies; General Therapeutics; Auscultation and Percussion; Chemical and Microscopic Examination of Secretions and Excretions; Special Pathology and Therapeutics (Medicine); Surgical Pathology, Dislocations, and Bandaging; Diseases of the Nervous System.

Fourth Year: Clinical Medicine; Clinical Surgery; Operative Surgery and Topographic Anatomy; Gynæcology and Obstetrics; Diseases of Children; Diseases of the Skin; Venereal Diseases; Diseases of the Eye and Ear; Hygiene; Forensic Medicine and Toxicology.

Fifth Year: Clinical Medicine; Clinical Surgery; Clinical Gynæcology and Obstetric Operations; Clinical Courses of Diseases of Children; Venereal Diseases; Diseases of the Eye and Mental Diseases; *post mortem* examinations.

At the end of each year the student has to undergo an examination in the subjects to which he has attended during the year; and at the end of the fifth year there is a final examination in all the subjects of the curriculum, except Natural History.

Having passed this examination, the candidate receives his diploma, which entitles him to practise in any part of the Russian Empire. There is no State examination. The examinations are public, and the examiners are the professors of the various subjects.

Two diplomas are granted. One corresponds to the title of physician or practitioner, which is granted after the above-mentioned examinations have been passed, and gives the right to practise. For the degree of Doctor of Medicine, the candidate must undergo, two years later, a further examination, and write and defend a thesis on a subject chosen by himself

ITALY.

GRADUATION IN MEDICINE.

THE Italian Universities at which degrees in Medicine are granted are the Royal Universities of Bologna, Cagliari, Catania, Genoa, Messina, Modena, Naples, Padua, Palermo, Pavia, Parma, Pisa, Rome, Sassari, Siena, and Turin; the free Universities of Camerino, Perugia, and Ferrara, and the Royal Institute for Superior Studies at Florence.

The regulations for graduation in medicine in the Universities of Italy are as follow:—

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical study extends over six years, at the end of which full licence to practise is granted. 3. The following courses of instruction are obligatory:— General Chemistry, Organic and Inorganic; Botany; Zoology, with Comparative Anatomy and Physiology; Experimental Physics; Normal Human Anatomy (*i.e.* Histology, Descriptive and Topographic Anatomy, and Dissection); Human Physiology; General Pathology; Pathological Anatomy (demonstrations and exercises); Materia Medica and Experimental Pharmacology; Special Medical Pathology (or Principles and Practice of Medicine); Special Surgical Pathology (Surgery); Clinical Medicine and Exercises in Semeiotics; Clinical and Operative Surgery; Theory and Practice of Ophthalmic Surgery; Theory and Practice of Diseases of the Skin and Syphilis; Midwifery and Clinical Midwifery; Forensic Medicine and Public Hygiene; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary:—Medical Chemistry, Experimental Toxicology, Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There are three biennial examinations in the Faculty of Medicine—the first for 'promotion,' the second for 'licence,' the third for the degree of 'laureate,' with a diploma conferring full licence to practise. 8. In the Universities of Pisa and Siena the licentiate has the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the course of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of instruction are Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board consists of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty, and with the consent of the Minister, the examination for promotion may be divided into two parts—one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year the Faculty determines what courses are to be followed, and when. 11. The candidate for admission to the several examinations (Licence) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. 12. The Examining Board is constituted as in Section 10. The examination is oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Pathological Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses, so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body and two clinical examinations. 15. The examination on the dead body is conducted by a sub-committee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate performs on the dead body a surgical operation, the nature of which is decided by lot. He also performs a necropsy, and draws up a description of the appearances seen. Finally, he answers the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of Forensic Medicine. 17. The first clinical examination is conducted in the presence of a sub-committee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination, the candidate examines four cases of disease selected from the four special classes which have not previously been examined or treated in the clinical wards, and gives his opinion on the diagnosis, prognosis, and treatment. He afterwards answers the questions and observations of the examiners, and especially replies to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The second clinical examination is conducted in the presence of a sub-committee, consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate examines in the presence of the sub-committee four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and writes a description of the cases. He finally answers the questions asked by the examiners. 21. A student must have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may present himself for examination in this subject only on a future occasion; but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third exami-

nation having been passed, a committee judges of the merits of the candidates, and the successful candidates are declared Doctors in Medicine and Surgery.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some recognised foreign University, and satisfactory proof that they have actually gone through all the studies and passed the examinations required for the same. They must also pass the ordinary examinations for the medical degree, and pay the fees. The examinations are usually conducted in the Italian or the Latin language.

UNITED STATES OF AMERICA.[*]

INSTITUTIONS GRANTING DEGREES.

The United States possess a very large number of institutions empowered by charter to grant the degree of Doctor of Medicine: these being in some instances special colleges and schools of medicine and surgery, and in others the medical departments of universities. The subjoined is a list of them. There are also several 'eclectic' and homœopathic colleges, which are not included in the list.

Alabama.—Medical College of Alabama (Mobile).

Arkansas.—Medical Department of Arkansas Industrial University (Little Rock).

California.—Cooper Medical College (San Francisco): Medical Department of the University of California (San Francisco): College of Medicine of the University of Southern California (Los Angeles).

Colorado.—Medical Department of the University of Denver: Medical Department of the University of Colorado (Boulder): Medical Department of the Rocky Mountain University (Gross Medical College, Denver).

Connecticut.—Department of Medicine, Yale University (New Haven).

District of Columbia.—National Medical College, Columbian University (Washington): Medical Department of the University of Georgetown (Washington): Medical Department of Howard University (Washington): Medical Department of National University (Washington).

Florida.—Medical Department of the University of Florida (Tallahassee).

Georgia.—Medical College of Georgia (Augusta): Atlanta Medical College: Southern Medical College (Atlanta).

Illinois.—Rush Medical College (Chicago): Chicago Medical College: Women's Medical College (Chicago): College of Physicians and Surgeons of Chicago: Physio-Medical Institute (Chicago): State Board of Health of Illinois: Chaddock School of Medicine (Quincy).

Indiana.—Physio-Medical College of Indiana (Indianapolis): Medical College of Indiana (Indianapolis): Central College of Physicians and Surgeons (Indianapolis): Fort Wayne College of Medicine.

Iowa.—State Board of Medical Examiners: College of Physicians and Surgeons (Keokuk): Medical Department of the State University (Iowa City): College of Physicians and Surgeons of Iowa (Des Moines).

Kentucky.—Medical Department of the University of Louisville: Kentucky School of Medicine (Louisville): Louisville Medical College: Hospital College of Medicine (Louisville).

Louisiana.—Medical Department of Tulane University of Louisiana (New Orleans).

Maine.—Medical School of Maine at Bowdoin College (Brunswick).

Maryland.—School of Medicine of the University of Maryland (Baltimore): College of Physicians and Surgeons (Baltimore): Baltimore Medical College: Women's Medical College (Baltimore): Baltimore University School of Medicine: Medical Department Johns Hopkins University (Baltimore).

Massachusetts.—Harvard University Medical School (Boston): College of Physicians and Surgeons (Boston).

Michigan.—Department of Medicine and Surgery, University of Michigan (Ann Arbor): Detroit College of Medicine (Detroit): Michigan College of Medicine and Surgery (Detroit).

Minnesota.—State Board of Medical Examiners: Medical Department of the University of Minnesota (Minneapolis).

Missouri.—State Board of Health of Missouri (St. Louis): Medical Department of the University of the State of Missouri (Columbia): Missouri Medical College (St. Louis): St. Louis Medical College: Kansas City Medical College: St. Louis College of Physicians and Surgeons: North-Western Medical College of St. Joseph: Medical Department of the University of Kansas City: St. Joseph Medical College: Ensworth Medical College (St. Joseph).

Nebraska.—Omaha Medical College.

New Hampshire.—Medical Department of Dartmouth College (Hanover).

New Jersey.—Medical Society of New Jersey.

New York.—College of Physicians and Surgeons in the City of New York: Albany Medical College: Medical Department of the University of the City of New York: Medical Department of the University of Buffalo: Long Island College Hospital (Brooklyn): Bellevue Hospital Medical College (New York): College of Medicine of Syracuse University: Women's Medical College (New York): Medical Department of Niagara University (Buffalo): Regents of the University of New York State.

North Carolina.—Board of Medical Examiners: Medical Department of Shaw University (Raleigh).

Ohio.—Medical College of Ohio (Cincinnati): Columbus Medical College: Starling Medical College (Columbus): Medical Department of the Western Reserve University (Cleveland): Cincinnati College of Medicine and Surgery: Miami Medical College (Cincinnati): Medical Department of the University of Wooster (Cleveland): Columbus Medical College: Toledo Medical College: North-Western Ohio Medical College (Toledo): Women's Medical College (Cincinnati).

Oregon.—Medical Department of the Willamette University (Portland): Medical Department University of State of Oregon.

Pennsylvania.—Medical Department of the University of Pennsylvania (Philadelphia): Jefferson Medical College (Philadelphia): Women's Medical College (Philadelphia): Medico-Chirurgical College of Philadelphia: Western Pennsylvania Medical College.

South Carolina.—Medical College of the State of South Carolina (Charleston).

Tennessee.—Medical Departments of the University of Nashville and Vanderbilt University (Nashville): Meharry Medical Department of Central Tennessee College (Nashville): Nashville Medical College, Medical Department of the University of Tennessee: Memphis Hospital Medical College.

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[*] For much information regarding medical education and practice in the United States of America we are indebted to the publications of the State Board of Health of Illinois.

Texas.—Texas Medical College and Hospital (Galveston).

Vermont.—Medical Department of the University of Vermont (Burlington).

Virginia.—Medical Examining Board of Virginia: Medical Department of the University of Virginia (Charlottesville): Medical College of Virginia (Richmond).

The laws regulating the practice of medicine vary in the different States. The following is an outline of the laws of each State and Territory:—

Alabama.—Diplomas of Medical Colleges confer no right to practise. Licences are granted after examination by the Board of Censors of the Medical Association of the State, and the Boards of Censors of the several County Medical Societies affiliated to the Association. There is a Medical Society and a Board of Examiners in every County in the State.

Arkansas.—Authorisation to practise is granted after examination by County Boards. Candidates rejected by County Boards may be examined by State Boards, and receive licence if found qualified. Licences are registered, and qualify for practice throughout the State.

California.—A Board of Examiners issues certificates to holders of genuine diplomas, and examines candidates for practice who are not graduates or licentiates.

Colorado.—The State Board of Medical Examiners grants licences to graduates after examination of their diplomas, and to other persons after an examination in medical science and practice.

Connecticut.—No law for recognition of diplomas or for examination. Itinerant practitioners are licensed.

Columbia (District).—The Medical Society of the District of Columbia grants licences after examination, or the production of a diploma from a recognised medical college or Board of Examiners.

Florida.—Boards of Medical Examiners examine and grant licences to persons not possessing diplomas.

Georgia.—Authorisation to practise is granted to holders of diplomas from incorporated medical colleges, medical schools, or universities. Practitioners must be registered in the county in which they practise.

Illinois.—The State Board of Health examines diplomas of persons desiring licence to practise, and issues certificates to those whose certificates are genuine. Other persons receive licence after examination by the Board. Certificates are registered in the counties in which the holders reside.

Indiana.—No law regulating qualifications. Practitioners of medicine are registered in the counties in which they reside.

Iowa.—Every person practising within the State is required to have a certificate from the State Board of Examiners. The certificates are granted to graduates of medical colleges of good standing after verification, and to others after examination before the Board.

Kansas.—The regulations are generally similar to those of California.

Kentucky.—All practitioners must be registered. Diplomas from legally chartered schools in the State, or from other American or foreign schools certified either by a State school or a State medical society, are recognised as giving the right to practise.

Louisiana.—Degrees of Doctor of Medicine from a recognised institution in America or Europe are recognised and certified by the State Board of Health. No provision for examination of candidates for registration.

Maine.—No law regulating medical practice.

Maryland.—No Act regulating medical practice.

Massachusetts.—No law regulating medical practice.

Michigan.—Graduates of legally authorised institutions in the United States or in other countries are registered.

Minnesota.—No diploma is recognised as entitling the possessor to practise. All practitioners must obtain a licence from the State Board of Medical Examiners after examination. Certificates are registered by county clerks.

Mississippi.—All candidates for practice must be examined and licensed by Boards of Censors, of which one is appointed for each congressional district. Diplomas are not recognised as qualifications. Licences to practise are registered in counties.

Missouri.—Degrees in Medicine are examined and verified by the State Board of Health. Licences are granted only to graduates, and the standard of recognition of medical colleges is the same as that of the Illinois Board. All certificates of Board are registered in the counties in which the holders reside.

Nebraska.—Graduates of medical colleges and persons licensed after examination by medical boards of other States are entitled to registration in their respective counties. No provision for ascertaining genuineness of diplomas.

Nevada.—Diplomas of chartered medical schools are recognised and registered in counties.

New Hampshire.—Boards of Censors elected by duly organised medical societies in the State grant licences to holders of satisfactory diplomas, and to other persons after examination.

New Jersey.—Graduates of medical colleges of universities of good standing, or medical societies authorised to grant diplomas, or persons legally qualified in other States, are entitled to be registered as practitioners in the counties in which they reside.

New Mexico (Territory).—A Board of Medical Examiners examines diplomas as to their genuineness, and examines persons not holders of diplomas. Certificates are registered in counties.

New York.—All qualifications must be registered in the counties where the practitioners reside. Diplomas of other States are examined, and, if approved, endorsed by an incorporated medical institution within this State. The degree of Doctor of Medicine granted within this State is a qualification to practise, when duly registered.

North Carolina.—A Board of Medical Examiners examines all applicants for licence to practise.

Ohio.—Persons are prohibited from practising who do not possess a degree from a School of Medicine in the United States or in a foreign country, or a certificate of qualification of a State or county medical society.

Oregon.—No law for regulating practice of medicine.

Pennsylvania.—Diplomas of legally chartered universities are recognised, on presentation to the protonotary of each county, and registration by him.

Before registration, however, the endorsement of a State Medical College must be obtained.

Rhode Island.—No regulations as to qualifications.

South Carolina.—Diplomas and qualifications are admitted, on being exhibited to the Faculty of some incorporated college or the Medical Board of the State, and, on approval, registered.

Tennessee.—There are no laws regulating the practice of medicine.

Texas.—Boards of Medical Examiners grant certificates of qualification, after examination. Certificates must be registered in counties.

Vermont.—Boards of Censors appointed by organised medical societies examine diplomas and recognise them if approved, and examine candidates not having diplomas; and grant certificates of authorisation to practise.

Virginia.—All persons wishing to practise medicine must be examined by the Board of Medical Examiners. Graduates and non-graduates are subjected to the same examination.

West Virginia.—The State Board of Health issues certificates of qualification to holders of diplomas of reputable colleges, and examines and licenses others.

Wisconsin.—Professional privileges are granted only to persons who have a diploma of some incorporated medical society or college, or who are admitted to practise after examination by a State or county medical Society.

Wyoming (Territory).—No person is allowed to practise without a diploma from a chartered medical school, to be registered in the county where the holder resides.

UNIVERSITY OF PENNSYLVANIA.

The Medical Department of this University is the oldest medical school in America, having been established in 1765 on the model of the University of Edinburgh. The following are the professors of the faculty as at present constituted:—Dr. W. Pepper, Provost of the University and *ex officio* President of the Faculty; Dr. Joseph Leidy (Anatomy); Dr. William Pepper (Theory and Practice of Medicine, and Clinical Medicine); Dr. D. Hayes Agnew (Clinical Surgery); Dr. James Tyson (Clinical Medicine); Dr. William Goodell (Gynæcology); Dr. Horatio C. Wood (Materia Medica, Pharmacy, and General Therapeutics); Dr. Theodore G. Wormley (Chemistry); Dr. John Ashhurst, jun. (Surgery); Dr. E. T. Reichert (Physiology); Wm. F. Norres (Ophthalmology); B. Cooke Hirst (Obstetrics); Dr. J. Wm. White (Clinical Surgery); Dr. Howard A. Kelly (Obstetrics); Dr. John Guiteras (Pathology and Morbid Anatomy); Dr. Geo. A. Piersol (Embryology and Histology); Dr. S. G. Dixon (Hygiene); also the following clinical professors of special subjects:—Dr. G. Strawbridge (Diseases of the Ear); Dr. L. A. Duhring (Diseases of the Skin); Dr. L. Starr (Diseases of Children); Dr. John H. Musser (Physical Diagnosis); Dr. De Forrest Willard (Orthopædic Surgery).

The curriculum is arranged as follows:—*First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final Examinations in General Chemistry, Materia Medica, Pharmacy, and Hygiene. *Second Year:* Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology, and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final Examinations in Anatomy, Medical Chemistry, and Physiology. *Third Year:* General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children; Gynæcology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children). Final examination for Degree at the end of the course. General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children.

Candidates for admission must have a collegiate degree, or a certificate of having passed the matriculation examination of a recognised college; or a certificate, covering the required subjects, from a recognised normal or high school, or from a duly organised county medical society that has instituted a preliminary examination; or a preliminary examination embracing, first, a brief essay which will serve as a test of qualifications in orthography and grammar; second, an examination in the elementary principles of physics, on the subjects considered in Part I. of Fownes's Chemistry.

The Faculty have established a fourth-year course, which embraces various special departments. The teaching consists in bedside and dispensary lessons, the treatment, examination of patients, and the use of instruments of precision in the diagnosis and treatment of disease.

The Laboratory Building is a spacious edifice of four floors: the first being devoted to operative dentistry; the second and third are fitted up as chemical laboratories; while the fourth contains the dissecting room. There are also a pharmaceutical laboratory, and one of experimental therapeutics, physiology, and pathology, including bacteriology.

During the first and second years, much of the student's time is occupied with practical work in the various laboratories of chemistry, pharmacy, osteology, histology and pathological histology, and in dissection; but throughout the second and third sessions he is required to attend the general medical and surgical clinics at the University and Philadelphia hospitals, while special clinical facilities are provided for the third year. In this year, each student receives bedside instruction in clinical medicine and surgery, in physical diagnosis, and in gynæcology. Opportunities are afforded for the practical study of diseases of the eye, ear, throat, and skin, and for acquiring proficiency in the use of the various instruments employed in their treatment. For this purpose the third-year class is divided into sections of convenient size, each of which receives direct personal instruction in the various practical subjects above mentioned. Advanced students may make original researches in the laboratories of pharmacy, chemistry, physiology, pathology, and experimental therapeutics.

Students who have attended one course in a regular medical school (homœopathic and 'eclectic' schools are not recognised) will be admitted as students of the second course in the University, after having satisfactorily passed an examination in

General Chemistry and Materia Medica and Pharmacy. Students who have attended two courses in a regular medical school will be admitted as students of the third course after having satisfactorily passed an examination in General and Medical Chemistry, Materia Medica and Pharmacy, Anatomy, and Physiology. Graduates of other regular medical schools of good standing will be admitted as students of the third course without an examination. Graduates of Colleges of Pharmacy and Dental Colleges in good standing are admitted to the second course without an examination.

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character. He must have studied medicine for three years, and have attended at least his last course of instruction in this school, and have passed the required examinations. The commencement for conferring the Degree of Doctor of Medicine is held on the 1st day of May, unless that day should fall on a Sunday, when it is held on the following Monday. The degree will not be conferred upon a candidate who absents himself from the public commencement, except by special permission of the Medical Faculty.

The entire College expenses for the three years' course is 455 dollars, including matriculation and graduation fees.

HARVARD UNIVERSITY, BOSTON.

THE Medical Faculty of this University is constituted as follows :—Dr. C. W. Eliot, *President;* Dr. Oliver W. Holmes, *Emeritus* Professor of Anatomy ; Dr. H. J. Bigelow, *Emeritus* Professor of Surgery ; Dr. H. P. Bowditch (Physiology); Dr. F. Minot (Theory and Practice of Physic) ; Dr. H. W. Williams (Ophthalmology) ; Dr. D. W. Cheever (Surgery) ; Dr. J. C. White (Dermatology) ; Dr. R. T. Edes (Assistant, Clinical Medicine) ; Dr. F. W. Draper (Assistant, Legal Medicine) ; Dr. F. T. Knight (Assistant, Laryngology) ; Dr. C. B. Porter (Assistant, Surgery) ; Dr. E. N. Whittier (Assistant, Clinical Medicine) ; Dr. J. Collins Warren (Assistant, Surgery) ; Dr. Reginald H. Fitz (Pathological Anatomy) ; Dr. William L. Richardson (Obstetrics) ; Dr. T. Dwight (Anatomy) ; Dr. Edward S. Wood (Chemistry) ; Dr. William H. Baker (Assistant, Gynæcology) ; Dr. W. B. Hills (Assistant, Chemistry).—Other instructors are :—Dr. S. H. Durgin (Lecturer on Hygiene) ; Dr. C. F. Folsom (Lecturer on Mental Diseases) ; Dr. H. P. Quincy (Instructor in Histology) ; Dr. F. A. Harris (Demonstrator of Medico-Legal Examinations) ; Dr. J. J. Putnam (Instructor in Diseases of the Nervous System) ; Dr. F. C. Shattuck (Instructor in Theory and Practice of Physic) ; Dr. E. H. Bradford (Assistant in Clinical Surgery) ; Dr. F. H. Davenport (Assistant in Gynæcology) ; Dr. G. M. Garland (Assistant in Clinical Medicine) ; Dr. J. W. Warren (Assistant in Physiology) ; Dr. G. W. West (Demonstrator of Bandaging and Apparatus) ; Dr. W. W. Gannett (Assistant in Pathological Anatomy) ; Dr. C. M. Green (Instructor in Obstetrics) ; Dr. T. M. Rotch (Instructor in Diseases of Children) ; Dr. C. S. Minot (Instructor in Histology and Embryology) ; Dr. F. H. Williams (Instructor in Materia Medica) ; Dr. W. C. Emerson (Assistant in Chemistry) ; Dr. W. J. Otis (Assistant in Operative Surgery) ; Dr. Samuel J. Mixter (Assistant in Anatomy) ; Dr. C. Harrington (Instructor in Hygiene and Assistant in Chemistry) ; Dr. H. C. Ernst (Demonstrator of Bacteriology) ; Dr. O. K. Newell (Assistant in Anatomy) ; Dr. H. F. Vickery (Assistant in Clinical Medicine). The following gentlemen will give special clinical instruction :—Dr. John Homans (Diagnosis and Treatment of Ovarian Tumours) ; Dr. T. W. Fisher and Dr. W. B. Goldsmith (Mental Diseases) ; Dr. Francis B. Greenough and Dr. A. Post (Syphilis) ; Dr. Oliver F. Wadsworth (Ophthalmoscopy) ; Dr. J. Orne Green and Dr. Clarence J. Blake (Otology) ; Dr. E. G. Cutler and W. W. Gannett (Auscultation) ; Dr. G. L. Walton (Diseases of the Nervous System) ; Dr. James R. Chadwick (Gynæcology) ; Dr. A. T. Cabot (Genito-urinary Surgery).

All candidates for admission who hold no degree in arts or science must pass a written examination on entrance to this School, in English, Latin, Physics, and in any one of the following subjects ; French, German, Elements of Algebra or of Plane Geometry, Botany.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing ; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent. upon all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course and have passed a satisfactory examination.

The order of studies and examinations for the four years' course is as follows :—*First Year:* Anatomy, Physiology, General Chemistry, and Materia Medica. *Second Year:* Practical and Topographical Anatomy, Medical Chemistry, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery. *Third Year:* Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery. *Fourth Year:* Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Forensic Medicine and Hygiene. Examinations in the subjects of the year are held at the end of each year.

The order for the three years' course is as follows : *First and Second Years*: As for the four years' course. *Third Year*: Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Forensic Medicine. The examinations of the first two years are common to both groups of students. The final examinations at the close of the third year are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Medicine, Clinical Medicine.

Every candidate for a degree must be twenty-one years of age; must have studied medicine three or four full years, have spent at least one continuous year at this school, have passed a written examination upon all the prescribed studies of the course taken, and have presented a thesis.

Course for Graduates.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies in such subjects as may specially interest them, the Faculty has established a course which comprises, in addition to the list of special departments above stated, the following branches: Anatomy; Histology; Physiology; Medical Chemistry; Pathological Anatomy; Bacteriology. Graduates of other Medical Schools who may desire to obtain the degree of M.D. at this University will be admitted to examination for this degree after a year's study in the Graduates' Course.

Fees.—The fees are: for Matriculation, 5 dollars; for the year, 200 dollars; for one term alone, 120 dollars; for Graduation, 30 dollars. For Graduates' course the fee for one year is 200 dollars; for one term, 120 dollars; and, for single courses, special fees. Payment is made in advance.

Students of regular standing in any one department of Harvard University have a right to attend lectures, recitations, and examinations in any other departments without paying additional fees.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

The sixty-fifth annual winter session will begin October 1, 1889, and will continue until April 1, 1890. Preliminary lectures will be held from September 23. Two courses of lectures are necessary for a degree. A three years' graded course is also provided. Practical laboratory instruction is given in all departments without extra charge. General and special clinics are given daily at the College Hospital. With the winter session of 1890–91 a three years' obligatory curriculum will begin.

Professors: J. M. DaCosta, M.D., LL.D., Practice of Medicine; Roberts Bartholow, M.D., LL.D., Materia Medica, General Therapeutics, Hygiene; Henry C. Chapman, M.D., Institutes of Medicine and Medical Jurisprudence; John H. Brinton, M.D., Practice of Surgery and Clinical Surgery; Theophilus Parvin, M.D., LL.D., Obstetrics and Diseases of Women and Children; J. W. Holland, M.D., Medical Chemistry and Toxicology; W. S. Forbes, M.D., General Descriptive and Surgical Anatomy; W. W. Keen, M.D., Principal of Surgery and Clinical Surgery; W. Thomson, M.D., Honorary Professor of Ophthalmology. *Lecturers:* Morris Longstreth, M.D., Pathological Anatomy; O. H. Allis, M.D., Orthopædic Clinic; Charles E. Sajous, M.D., Laryngological Clinic; O. P. Rex, M.D., Children's Clinic; Arthur E. Van Harlingen, M.D., Dermatological Clinic; James C. Wilson, M.D., Renal Diseases Clinic. *Demonstrators:* A corps of eleven Demonstrators and their assistants.

A spring course of Supplementary Lectures is given, beginning early in April and ending early in June. There is no additional charge for this course to matriculates of the College, except a registration fee of 5 dols.; non-matriculates pay 40 dols., 35 of which are, however, credited on the amount of fees paid for the ensuing winter course.

To each course of the regular curriculum there is appended a Laboratory Course, carried on in large and thoroughly equipped apartments in the College by specially appointed demonstrators, under the immediate direction of the professor. In this way each candidate for the degree of Doctor of Medicine is immediately and personally taught in Obstetrics and Gynæcology, Physical Diagnosis, Laryngology, Ophthalmology, Medical Chemistry, Pharmacy, Materia Medica and Experimental Therapeutics, Physiology, Histology and Experimental Physiology, and Minor Surgery, Bandaging, Operations on the Cadaver, &c. In the department of Medicine there are clinical conferences and practical lessons in Physical Diagnosis. This course of instruction is free of charge, but obligatory upon candidates for the degree, except those who have had such instruction and those who are graduates of other colleges.

Opportunities are afforded to graduates in Medicine for pursuing special courses, and for instruction in recognised specialities.

Clinical Instruction is given throughout the year at the Hospital of Jefferson Medical College, and at the Pennsylvania and other hospitals.

A candidate for the degree of M.D. must be of good moral character, and at least twenty-one years of age. He must have studied Medicine for not less than three years, and have attended at least two full winter sessions of lectures, one of which must have been in this College. At least one course of Practical Anatomy and one of Clinical Instruction must have been attended. No honorary degrees in Medicine are granted.

The *Fees* are for a full Course, 140 dollars; Matriculation Fee (paid once only), 5 dollars; Practical Anatomy, 10 dollars; Graduation Fee, 30 dollars. For a full Course of Lectures to those who have attended two full courses at other recognised Colleges, the Matriculation Fee and 70 dollars; to Graduates of other Colleges, the Matriculation Fee and 50 dollars.

UNIVERSITY OF THE CITY OF NEW YORK.

The Professors in the Faculty of Medicine are:—Dr. Charles Inslee Pardee (Otology); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. William H. Thomson (Materia Medica and Therapeutics; Diseases of the Nervous System); Dr. Wm. Mecklenburg Polk (Obstetrics and Diseases of Women and Children); Dr. Lewis A. Stimson (Surgery); Dr. Rudolph A. Witthaus (Chemistry and Physics); Dr. W. Gilman Thompson (Physiology); Dr. Stephen Smith (Clinical Surgery); Dr. A. E. Macdonald (Medical Jurisprudence and Psychological Medicine); Dr. Charles Stedman Bull (Ophthalmology); Dr. Henry G. Piffard (Dermatology); Dr. Joseph E. Winters (Diseases of Children): Dr. Prince A. Morrow (Venereal Diseases); Dr. William C. Jarvis (Laryngology); Dr. Laurence Johnson (Medicine); Dr. A. M. Phelps (Orthopædic Surgery); Dr. Henry P. Loomis (Pathology); Dr. E. D. Fisher (Medical

Jurisprudence and Psychological Medicine); Dr. Chas. E. Quimby (Practice of Medicine); Dr. J. Clifton Edgar (Obstetrics). The Professorship of Anatomy is at present vacant.

The Collegiate Year is divided into three Sessions: a Preliminary, a Regular Winter, and a Spring Session.

The Preliminary Session will begin on Wednesday Sept. 25, 1889, and end Oct. 1, 1889. It will be conducted on the same plan as the Regular Winter Session.

The Regular Winter Session will begin Oct. 2, 1889, and end about March 1890. The plan of Instruction consists of Didactic and Clinical Lectures, recitations and laboratory work in all subjects in which it is practicable.

Laboratories and Section Teaching.—The complete remodelling of the College building, and the addition of the new 'Loomis Laboratory' will afford greatly increased laboratory accommodations in the departments of Biology, Pathology, Physiology, Chemistry and Physics. A new amphitheatre and a new lecture room have been provided, as well as adequate facilities for Section teaching, in which the material from the College Dispensary will be utilised.

Two to five Didactic Lectures and two or more Clinical Lectures will be given each day by members of the Faculty. In addition to the ordinary clinics, special clinical instruction, without additional expense, will be given to the candidates for graduation during the latter part of the Regular Session. For this purpose the candidates will be divided into sections of twenty-five members each. All who desire to avail themselves of this valuable privilege must give in their names to the Dean during the first week. At these special clinics students will have excellent opportunities to make and verify diagnosis, and watch the effects of treatment. They will be held in the Wards of the Hospitals and at the Public and College Dispensaries.

Each of the seven Professors of the Regular Faculty, or his assistant, will conduct a recitation on his subject one evening each week. Students are thus enabled to make up for lost lectures and prepare themselves properly for their final examinations without additional expense.

The Spring Session will begin about the middle of March and end the last week in May. The daily Clinics and Special Practical Courses will be the same as in the Winter Session, and there will be Lectures on Special Subjects by Members of the Faculty.

It is supplementary to the Regular Winter Session. Nine months of instruction are thus secured to all students of the University who desire a thorough course.

Fees.—These are: For course of Lectures, 140 dollars. Matriculation, 5 dollars. Demonstrator's Fee, including material for dissection, 10 dollars. Final Examination Fee, 30 dollars.

BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

The teaching staff of the College consists of the following professors:—Dr. Edward G. Janeway (Principles and Practice of Medicine and Clinical Medicine); Dr. F. S. Dennis (Principles and Practice of Surgery and Clinical Surgery); Dr. Lewis A. Sayre (Orthopædic Surgery and Clinical Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. A. A. Smith (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (Anatomy and Clinical Surgery); Dr. R. Ogden Doremus (Chemistry, Toxicology, and Medical Jurisprudence); Dr. Henry D. Noyes (Ophthalmology and Otology); Dr. A. F. MacDonald (Mental Diseases); Dr. Beverley Robinson (Clinical Medicine); Dr. Samuel Alexander (Genito-Urinary Surgery, Syphilology, and Dermatology); Dr. J. L. Smith (Diseases of Children); Dr. F. H. Bosworth (Diseases of the Throat); Dr. C. A. Doremus (Adjunct to Chair of Chemistry and Toxicology); Dr. L. M. Yale (Adjunct, Diseases of Children).

The Collegiate Year in this Institution embraces the Regular Winter Session and a Spring Session. The Regular Session begins on Wednesday, September 25, 1889, and ends about the middle of March 1890. In addition to four didactic lectures on every week-day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The Spring Session consists chiefly of recitations from text-books. This Session begins about the middle of March, and continues until the middle of June. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building. The Carnegie Laboratory is open during the collegiate year, for instruction in microscopic examination of urine, and lessons and demonstrations in histology and pathology.

Fees.—For the Regular Session: Tickets to all the Lectures, Clinical and Didactic, 140 dollars; for students who have attended two full courses at other Medical Colleges, and for graduates of other Medical Colleges, 70 dollars; Matriculation fee, 5 dollars; Dissection fee (including material for dissection), 10 dollars; Graduation fee, 30 dollars. No fees for lectures are required from third-course students who have attended their second course at the Bellevue Hospital Medical College. For the Spring Session: Matriculation (ticket valid for the following winter), 5 dollars; Recitations, Clinics, and Lectures, 40 dollars; Dissection (ticket valid for the following winter), 10 dollars.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.

This is otherwise known as the Medical Department of Columbia College.

The work required by students matriculated at this College after July 1, 1888, who are candidates for the degree of M.D., is distributed over three years of study according to the following curriculum: *First Year.*—Didactic Lectures in: 1, Anatomy; 2, Physiology; 3, Physics and Chemistry. Practical Work in: 1, Dissection; 2, Normal Histology; 3, Physiological and Medical Chemistry. *Second Year.*—Didactic Lectures in: 1, Anatomy; 2, Physiology; 3, Physics and Chemistry; 4, Materia Medica and Therapeutics, including Hygiene; 5, Pathology and Practical Medicine; 6, Principles and Practice of Surgery; 7, Obstetrics and Gynæcology, Dissection. Clinical Lectures at the Vanderbilt Clinic in: 1, General Medicine; 2, General Surgery. Practical Clinical Work in: 1, General Medicine; 2, General Surgery. *Third Year.*—Didactic Lectures in: 1, Materia Medica and Therapeutics, including Hygiene. 2, Pathology and Practical Medicine; 3, Principles and Practice of Surgery; 4, Obstetrics and Gynæcology; 5, Ophthalmology. Clinical Lectures at the Vanderbilt Clinic in: 1, Diseases of the Mind and Nervous System; 2, Gynæcology; 3, Diseases of Children; 4, Genito-Urinary Diseases, including Syphilis; 5, Diseases of the Skin; 6, Diseases of the Throat; 7, Diseases of the Eye; 8, Diseases of the Ear. Practical Clinical Work in the eight subjects enumerated immediately above under the head of 'clinical lectures,' and in Obstetrics. Practical Work in Pathology and Pathological Histology.

The requirements for graduation are as follows:—I. *A.* Candidates who are not already graduates in medicine of recognised institutions must have pursued the regular three years' curriculum at this College; or, the regular curriculum of the second and third years at this College, and such a course at some other medical school as shall have been recognised by the Faculty as an equivalent for the first year's curriculum at this College. No course at another medical school will be so recognised, which shall have begun during the same calendar year as that in which the student who shall have attended it shall have entered this College. *B.* Graduates in medicine of recognised institutions must have pursued at this College at least the regular curriculum of the third year.

II. All candidates, whether already graduates in medicine or not, must pass at this College examinations satisfactory to the Faculty in: 1, Anatomy; 2, Physiology; 3, Physics and Chemistry; 4, Materia Medica and Therapeutics, including Hygiene; 5, Pathology and Practical Medicine; 6, Principles and Practice of Surgery; 7, Obstetrics and Gynæcology; 8, Clinical Studies.

III.—Candidates must present satisfactory evidence of good moral character and of having attained the age of twenty-one years.

IV. Candidates must have studied medicine thirty-six months under the direction of a regular practitioner or practitioners of medicine. The three years of medical study with a preceptor include the time spent in attendance upon medical schools, and must be exclusive of any time spent as an undergraduate at a non-medical institution; but the two years' course styled 'Preparatory to the Study of Medicine,' at the Cornell University, the Sheffield Scientific School of Yale University, the Johns Hopkins University, the College of New Jersey, or the University of Wisconsin, is accepted in place of six months' study with a preceptor, in the case of a student who afterwards attends three sessions at this College. The phrase 'regular practitioner or practitioners' is used in the sense commonly understood in the medical profession. Certificates of preceptorship from Eclectic, Homœopathic, or other so-called 'irregular' practitioners will not be received, even if such practitioners be graduates of regular medical schools.

The professional examinations in all the eight branches are in writing, and are held immediately after the close of the lectures of the College year.

The examination in the topic of 'Clinical Studies' comprises one question in each of the following subjects, set by the Clinical Professor thereof, viz.: 1, Diseases of the Mind and Nervous System; 2, Diseases of the Genito-Urinary Organs, including Syphilis; 3, Diseases of Children; 4, Diseases of the Eye; 5, Diseases of the Ear; 6, Diseases of the Throat; 7, Diseases of the Skin. With the exception of such graduates in Medicine as attend at this College only the third year of the curriculum, candidates, if they so elect, are eligible for examination in any or all of the three branches of: 1, Anatomy; 2, Physiology; and 3, Physics and Chemistry; and upon these only, on completing the first two years of the curriculum. Such an examination in any or all of the said three subjects, if satisfactory, is accounted final, unless the candidate subsequently is rejected for the degree of M.D., as set forth below. A candidate who has been unsuccessful, at the end of his second year, at any of the three examinations above specified, is not eligible for re-examination in the branch or branches in which he has failed until the time of his final examination for graduation. According to the merits of his examinations, three results of the latter are possible in the case of a candidate for the degree of M.D.:—1. He is 'passed' when his examinations have been satisfactory in each and all of the eight branches of medical teaching enumerated under the head of Graduation, Section II. 2. He is 'conditioned' when the average merit of his eight examinations has been satisfactory, while in one or more branches he has been found deficient. In this case the candidate can proceed to his degree only on the condition that he first pass a re-examination in the deficient branch or branches, not sooner than at the next regular examination. Candidates are not 'conditioned,' however, in the topic of 'Clinical Studies.' 3. He is 'rejected' when the average merit of his eight examinations has been unsatisfactory. In this case the candidate must be re-examined in all the eight branches.

For the session of 1889-90, and thereafter, final examinations for the degree of M.D. will be held annually early in October, for the sole purpose of re-examining 'rejected' or 'conditioned' candidates, who, if successful at that time, will be advanced to their degrees at the November meeting of the Trustees. A candidate who has been 'rejected' twice, or more, for the degree of M.D. is thereafter eligible for re-examination only at the stated examinations held in the spring, and must pay a new matriculation fee between every two periods of re-examination.

Fees.—These are, for courses of lectures, 150 dollars; matriculation each year, 5 dollars; anatomical material, 1 dollar each part; graduation fee, 30 dollars.

NEW YORK POST-GRADUATE SCHOOL.

In 1882 there was founded in New York an institution under this name, for the purpose of giving instruction in medical science and practice to gentlemen who had obtained degrees in medicine.

No undergraduates are admitted, and no degrees are conferred, but the School is open to all legalised practitioners, and it is especially available for the young graduate who wishes to acquaint himself with the practical duties of his profession, or for older practitioners who are desirous of taking up some special branch of medicine, or who wish to familiarise themselves with the modern advances in diagnosis and treatment. The instruction is given by means of clinics, subjects, and specimens. There are no lectures except clinical lectures, and no demonstrations without subjects and specimens.

The Dispensary, and the Hospitals to which the instructors are attached, furnish more than 16,000 patients annually for the illustration of General Medicine and Surgery, Mental and Nervous Diseases, Gynæcology, Obstetrics, Genito-Urinary Diseases, Cutaneous and Syphilitic Affections, Orthopædic Surgery, Diseases of Children, Diseases of the Eye and Ear, and of the Throat and Nose. The new Anatomical Room provides for studies in Practical Anatomy and Operative Surgery on the dead body. Practical Pharmacy and Medical Chemistry are taught in the Chemical and Pharmaceutical Laboratories. The new Histological and Pathological Laboratory is also most thoroughly equipped. In the Department of Applied Anatomy, instruction is given on living models, as well as on the dead subject. In addition to the above, the various members of the Faculty hold positions and give instruction in various hospitals and dispensaries.

Each department of the School is open throughout the entire year, and special facilities are given to those who desire to prosecute any line of study, at any time.

The year is divided into two Terms, the *Regular* and the *Intermediate*. During the Regular Term instruction is carried on by the Professors, Associate Professors, and Lecturers. There is but one course, of four months, in the Intermediate Term. A daily clinic is held throughout this period.

Practitioners may enter the School at any time, and take one or more courses of seven weeks' duration, in any department. Special advantages are secured by those who take several courses or pursue continuous studies. Candidates for the *Army* and *Navy* will have special instruction in Civic, Naval, and Military Hygiene, Examination of Recruits, &c.

The Faculty of the School is constituted as follows:—Dr. D. B. St. John Roosa (Professor of the Diseases of the Eye and Ear, President of the Faculty); Dr. Frederic R. Sturgis (Professor of the Diseases of the Skin and Genito-Urinary Organs, and of Venereal Diseases); Dr. Thomas E. Satterthwaite (Professor of Pathology and General Medicine); Dr. Charles L. Dana (Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity); Dr. Andrew H. Smith, Professor of Clinical Medicine and Therapeutics); Dr. William O. Moore (Professor of the Diseases of the Eye and Ear); Dr. Bache McE. Emmet (Professor of Diseases of Women); Dr. Edward Kershner (Professor of Naval, Military, and State Hygiene); Dr. Ambrose L. Ranney (Professor of the Anatomy and Physiology of the Nervous System); Dr. George H. Fox (Professor of the Diseases of the Skin); Dr. William H. Porter (Professor of Clinical Medicine and Pathology); Dr. Stephen S. Burt (Professor of Physical Diagnosis); Dr. Seneca D. Powell (Professor of Minor Surgery); Dr. C. A. Von Ramdohr (Professor of Obstetrics); Dr. Horace T. Hanks (Professor of Diseases of Women); Dr. H. J. Garrigues (Professor of Obstetrics); Dr. Lewis S. Pilcher (Professor of Clinical Surgery); Dr. Clarence C. Rice (Diseases of the Throat and Nose); Dr. Charles Carroll Lee (Diseases of Women); Dr. J. R. Nilsen (Diseases of Women); Dr. Graeme M. Hammond (Diseases of the Mind and Nervous System); Dr. George B. Fowler (Clinical Medicine and Medical Chemistry); Dr. Robert Abbe (Clinical Surgery); Dr. Henry D. Chapin (Diseases of Children); Dr. A. M. Phelps (Orthopædic Surgery); Dr. A. D. Rockwell (Electro-Therapeutics); Dr. L. Bolton Bangs (Diseases of the Genito-Urinary Organs and of Venereal Diseases); Dr. Peter A. Callan (Diseases of the Eye); Dr. O. B. Douglas (Diseases of the Nose and Throat); Dr. Joseph O'Dwyer (Diseases of Children); Dr. R. W. Taylor (Diseases of Skin); Dr. J. B. Emerson (Diseases of the Eye and Ear); Dr. John H. Ripley (Diseases of Children); Frederick Bagoe, Ph.B. (Pharmacology).

CANADA.

MEDICAL EXAMINING BODIES.

THE following are the Medical Examining Bodies and Schools in the Dominion of Canada.

Ontario.—Toronto School of Medicine, affiliated with the University of Toronto and the University of Victoria College; Trinity Medical College, affiliated with the Universities of Trinity College, Toronto, Manitoba, Queen's University, and Victoria University; Royal College of Physicians and Surgeons, affiliated with the Queen's University; Medical Department of the Western University, London; Women's Medical College, affiliated with the University of Trinity College, Toronto; Women's Medical College, Kingston, affiliated with Queen's University.

Quebec.—Medical Department of McGill University; École de Médecine et de Chirurgie, affiliated with the University of Victoria; Medical Department of Laval University; Faculty of Medicine, University of Bishop's College; College of Physicians and Surgeons of Quebec.

Nova Scotia.—Halifax Medical College; Medical Faculty of Dalhousie University, Halifax.

Manitoba.—Manitoba Medical College, affiliated with the University of Manitoba.

The possession of an M.D. degree does not entitle the holder to practise. He must be *registered.* In the Provinces of the Dominion, with the exception of Ontario, the possession of a Degree in Medicine from a recognised University entitles the holder to register. In *Quebec*, graduates of the Universities of the province must appear in person at the May or September meeting of the Board, and present and swear to their diplomas. Registration is granted only at these periods. It is optional with the Board whether the holder of a degree from a Canadian University outside the Province of Quebec can register without further examination. In some cases the examination has been enforced. In *Ontario*, unless in the case of a registered practitioner of Great Britain, the examination of the College of Physicians and Surgeons of the province must be passed before registration. The examination is held every spring. In *Nova Scotia*, *New Brunswick*, *Manitoba*, and *British Columbia* the provincial boards accept the degrees of Canadian Universities without examination. *Prince Edward Island* has as yet no Medical Board. In most of the *West India Islands* a certificate of registration in one of the Provinces of the Dominion entitles the holder to practise.

UNIVERSITY OF TORONTO.

THE degree of Bachelor of Medicine may be obtained either (1) by taking a Pass Course, or (2) by taking an Honour Course.

Candidates must pass the Matriculation Examination unless (1) they possess a Degree in Arts, not being honorary, from any Dominion or British University; or (2) they have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University; or (3) they have been registered as students in the College of Physicians and Surgeons of Ontario. They must also produce satisfactory certificates of good conduct, and of having completed the sixteenth year of their age. The Matriculation Examination (both Pass and Honours) commences in the latter part of June, and Supplemental Examinations (Pass alone) are held in the latter part of September, when those who were rejected in June, as well as new candidates, may present themselves. Candidates on giving notice of intention to present themselves must signify whether they propose taking the Pass or the Honour Examination. Scholarships are only awarded in connection with the latter. The following groups of subjects must be passed:—(1) Two out of four languages—Latin, Greek, French, and German—one of which must be Latin; (2) Mathematics, including Arithmetic, Algebra to the end of Quadratics, and the first three books of Euclid; (3) English Grammar, Composition, and Dictation, with the Outlines of English History and the Geography of America and Europe.

Undergraduates must attend lectures and receive practical instruction during four years at a recognised School of Medicine. Each undergraduate, at the end of each of the four years, may present himself at the Annual Examination, or he may take the primary examination at the end of the second and the final examination at the end of the fourth year. Graduates in Arts of this University, with honours in the department of Natural Sciences, are exempted from the First Professional Examination, and from the fee for the same. They must, however, take Anatomy along with the Second Professional Examination.

The following are the certificates required for the different examinations, and the subjects of examination.

First Professional Examination.—Certificates are required:—1. Of Matriculation. 2. Of having attended a course of lectures on each of the following subjects—Anatomy, 100 lectures; Physiology and Inorganic Chemistry, each 60; Natural Philosophy, 20; Botany and Zoology, each 30. 3. Of practical instruction in Anatomy during six months.

Second Professional Examination.—Candidates must produce certificates:—1. Of having attended lectures on Anatomy, Physiology, Materia Medica, and Therapeutics, each 100 lectures; Organic Chemistry. 2. Of practical instruction in Anatomy, six months; Histology and Physiological Chemistry, each three months. 3. Of having dissected the human body once. 4. Of being skilled in compounding and dispensing Drugs.

Third Professional Examination.—The candidates must produce evidence: 1. Of having attended lectures on Practice of Medicine, Surgery, and Obstetrics, each 100 lectures; Clinical Surgery and Medicine and General Pathology, each 50. 2. Of having dissected the human body a second time. 3. Of practical Instruction in Pathological Histology during three months.

Fourth Professional Examination.—Candidates must produce evidence: 1. Of having attended lectures on—Clinical Medicine and Surgery, and Forensic Medicine, each 50 lectures; Hygiene, 25; Medical Psychology, 12. 2. Of practical Instruction in Chemistry in its application to Hygiene and Forensic Medicine. 3. Of having attended at least six clinics in a Public Lunatic Asylum. 4. Of having conducted at least six Labours. 5. Of proficiency in Vaccination. 6. Of attendance in the wards of a Public Hospital accommodating not less than 100 beds during eighteen months. 7. Of attendance for six months on the out-practice of a Hospital, Dispensary, or registered Practitioner. 8. Of having attended twelve Necropsies.

Candidates for Honours are entitled to First Class Honours in any of the Professional Examinations if they obtain 75 per cent. of the aggregate marks; those who obtain 66 per cent. will be entitled to Second Class Honours. Extra papers on all the Pass Subjects will be set for Honour Candidates, as well as papers on certain extra Honour subjects, viz., Comparative Anatomy of the Vertebrata, Natural Philosophy, the Philosophy of Nerve, Muscle, Circulation, &c. Candidates proceeding to the Degree of M.B. by taking the Honour Courses are grouped in two classes. Those receive the Degree with First Class Honours who have been placed in the First Class Honour List in the second, third, and fourth Professional Examinations. Those receive their Degree with Second Class Honours who have been placed in the Honour List in the second, third, and fourth Professional Examinations.

Scholarships, &c.—The following Scholarships are annually offered for competition: At Matriculation, one of 100 dollars and one of 50 dollars; at each of the first three Professional Examinations, one of 120 dollars and one of 80 dollars. The First Year Scholarships are not open to Graduates in Arts with Honours in the Department of Natural Sciences. No Professional Scholarship will be awarded to any Candidate who has not obtained First Class Honours in the Examination for which it was conferred. Each Scholarship is tenable for one year only, but the Scholar of one year is eligible for the Scholarship of a succeeding year. A gold medal and three silver medals are offered annually for competition among the Undergraduates who have obtained the degree of M.B., with First Class Honours, and are awarded according to the percentage of marks in the aggregate results of the second, third, and fourth Professional Examinations; but the gold medal is only awarded on the special recommendation of the Examiners. Prizes, each of the value of 10 dollars, in books, may be awarded annually among Undergraduates in Law, Medicine, and Arts, for the best composition in Greek Verse, Greek Prose, Latin Verse, Latin Prose, English Verse, English Prose, French Prose, or German Prose. Certificates of Honour will be given to those students who, at any of the examinations, have been placed in the First Class in Honours in any Department. One gold and two silver medals, called the 'Starr Medals,' are conferred upon the three Bachelors of Medicine who have obtained, in the course of their Annual Professional Examinations, the highest marks in the following subjects: Anatomy for the first and second years, and in Surgical Anatomy of the third year; Physiology for the first and second years, and Histology, Physiological Chemistry, and Practical Physiology of the second year; General Pathology and in Morbid Anatomy and Histology of the third year. Every recipient of the medal must have attained the standing of First Class in each of the above-mentioned subjects, and must have been classed in Honours in the Fourth Professional Examination.

Degree of M.D.—Candidates for the degree of M.D. must be of one year's standing from admission to the degree of M.B., and must have composed an approved thesis upon some medical subject.

Fees.—The fees are: Matriculation, 5 dollars; each Professional Examination, 2 dollars; Degree of M.B., 20 dollars; Degree of M.D., 20 dollars; admission *ad eundem gradum*, 20 dollars.

UNIVERSITY OF TRINITY COLLEGE.

A CANDIDATE for the Degree of Doctor of Medicine and Master of Surgery in this University must have passed the Matriculation Examination in Arts or Medicine of Trinity College, or of some other recognised University, or that of the College of Physicians and Surgeons of Ontario or Quebec, or that of the Law Society of Upper Canada, or an examination equivalent to any of the above. The subjects of the Medical Matriculation Examination are: Writing and Dictation; English Language; Arithmetic; Algebra (including Simple Equations); Euclid (first two Books); Latin (Cæsar, *De Bello Gallico*, Books I. and II., or Books V. and VI.; or *Bellum Britannicum*; or Cicero, *De Lege Maniliâ*; or Virgil, *Æneid*, Book II.); and one of the following subjects: Scripture History, and St. Matthew's Gospel, ch. i. to ix., in Greek; Greek (Xenophon's *Anabasis*, Book I.); French (Voltaire's *Charles XII.*, Books VI. to VIII.); German (Schiller's *Thirty Years' War*, Book I.); or Natural Philosophy.

The candidate must produce a satisfactory certificate of good conduct, must be 21 years of age, and must have regularly attended lectures extending over four winter sessions, or have studied one year with a medical practitioner, and have subsequently attended lectures during three winter sessions. He must have attended, before the primary examination, two courses of six months each on Anatomy, Practical Anatomy, Chemistry, Materia Medica and Therapeutics, and Physiology, including Histology, and one course of three months of Practical Chemistry, including Toxicology and Botany. Before the final examination he must have attended two courses of six months each on Medicine, including Pathology, Surgery, Midwifery, and Diseases of Women and Children; two courses of three months each on Medical Jurisprudence, and one course on Sanitary Science. He must also have attended for at least eighteen months the practice of some General Hospital, and have attended, during two sessions, Clinical Lectures on Medicine and Surgery; and, for at least six months, the practice of a Lying-in-Hospital; or he must have otherwise enjoyed equivalent obstetrical advantages, with attendance upon at least six cases of Labour.

The examinations are Primary and Final. The Primary Examination embraces Descriptive Anatomy, Physiology (including Histology), General Chemistry and Chemical Physics, Practical Chemistry, Botany, Materia Medica and Therapeutics, and Toxicology. It may be passed at the close of the second year.

The Final Examination embraces Theory and Practice of Medicine, including Medical Pathology, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. It takes place at the close of the fourth year.

The Primary and Final Examinations may be taken together at the end of the fourth year. Registered practitioners holding British or Colonial Diplomas, who furnish satisfactory evidence that they have passed an examination equivalent to the Primary, are required to pass only the Final Examination. The examinations are held annually in the spring.

Certificates of Honour are given to students who pass in first-class honours. Medals are awarded to students who obtain at least 75 per cent. of the maximum number of marks.

Fees.—These are: Primary Examination, 10 dollars; Final Examination, 14 dollars. Full fee, including all College Examinations, 24 dollars. Candidates rejected at either the Primary or the Final Examination have the fee returned, less 5 dollars.

TRINITY MEDICAL COLLEGE.

THIS College is in affiliation with the University of Trinity College; also with the Universities of Toronto and Manitoba, and Queen's and Victoria Universities; and is recognised by the Royal Colleges of Physicians and Surgeons of Great Britain, by the King's and Queen's Colleges of Physicians in Ireland, and by the Conjoint Examining Boards in London and Edinburgh.

The Faculty consists of the following Professors: Walter B. Geikie, M.D. (Principles and Practice of Medicine and Clinical Medicine); H. Robertson, M.D. (Anatomy); J. Algernon Temple, M.D. (Obstetrics, Gynæcology, and Diseases of Children); Thomas Kirkland, M.A. (General Chemistry and Botany); C. W. Covernton, M.D. (Medical Jurisprudence and Toxicology); Fred. Le M. Grassett, M.B., C.M. (Principles and Practice of Surgery and Clinical Surgery); W. T. Stuart, M.D. (Practical and Analytical Chemistry); Charles Sheard, M.D. (Physiology and Histology); G. Sterling Ryerson (Ophthalmology, Otology, and Laryngology); Luke Teskey, M.D. (Pathology); John L. Davison, M.D. (Materia Medica and Therapeutics); G. A. Bingham, M.D. (Assistant Demonstrator of Anatomy); T. M. Hardie, M.B. (Zoology); E. B. Shutleworth (Practical Pharmacy, &c.); T. S. Covernton (Lecturer on Sanitary Science); Albert Powell Newton, M.D. (Lecturer on Surgical Appliances).

The Medical Council of Ontario requires that everyone who desires to be registered as a medical student shall present to the Registrar the official certificate of having passed the Second-class non-Professional Examination with Latin. These Examinations must include English Grammar, English Literature, Composition, Dictation, Arithmetic, Algebra and Euclid, History and Geography, Latin. Students who may have passed this examination without Latin can complete the examination by going up, before registration, for Latin only. Graduates in Arts, or students who have matriculated in Arts in any University in her Majesty's dominions, are not required to pass any further Matriculation Examination. The Universities of Trinity College and of Toronto, Queen's University, and Trinity Medical School, do not insist on the Matriculation Examination being passed before attendance on medical lectures, but strongly recommend that it should be passed as soon after entering as possible, and in every case before the Primary

Professional Examination. A certificate of having passed the Matriculation Examination in any British or Colonial University, or that required by the Medical Council of Ontario, or by the various Colleges of Physicians or Surgeons in Great Britain and Ireland, or that of the College of Physicians and Surgeons of Quebec, or that of the Law Society of Ontario or Quebec, or having passed an examination, whether for a teacher's certificate in any of the provinces of the Dominion or an examination equivalent to any of the above, is also accepted by Trinity Medical School, and by the University of Trinity College. Non-matriculated students from the Maritime Provinces, Manitoba, and the North-West, the West Indies, or other British Colonies, the United States, or from any quarter, who do not take the Council's examinations, are admitted to attend lectures in the School. But if such desire to graduate at Trinity College, they must present themselves for the Trinity University Medical Matriculation Examination. Students who are not graduates or matriculates in Arts, who desire to graduate in the University of Toronto, must take the Medical Matriculation of that institution.

The matriculation of the Universities may be passed at any time before graduation.

The Toronto General Hospital has a large number of patients in the wards, who are visited daily by the medical officers in attendance. The attendance of outdoor patients daily is also very large. The Fever Hospital, the Burnside Lying-in Hospital, and the Eye and Ear Hospital are also in the same grounds. The Toronto Dispensary is open to students free of charge.

Daily Clinical instruction is given by members of the Hospital Staff on all interesting cases, Medical and Surgical. Special Clinical instruction is also given by the Professors of Midwifery at the Burnside Hospital, and by other members of the Staff of the Hospital, on Diseases of Women and Children, and on Practical Midwifery, and special Practical Instruction at the Eye and Ear Department of the Hospital is also regularly given, as well as on Dermatology.

Professional Examinations are conducted at the close of the first, the second, and the last sessions, and are known as the First Year's, the Primary, and the Final Examinations respectively.

1. *First Year.*—Anatomy of the Bones, Ligaments, Muscles, also the Viscera of the Abdomen and Thorax. Candidates for this examination must present a certificate of having dissected an upper and a lower extremity, and must pass practical examinations in the parts dissected. The Physiology of the Elementary Tissues, also of Respiration, Circulation, and Digestion. Elementary Materia Medica, Inorganic Chemistry, including chemical theory. Physics: heat, light, and electricity. Botany.—A supplementary first year's examination will be held on the first Saturday in November.

2. *Primary.*—Descriptive Anatomy, Physiology and Microscopic Anatomy, Chemistry, Theoretical and Practical, Toxicology, Botany (when not passed at the end of the first year), and Materia Medica. The primary examination may be passed at the close of the second winter session.

3. *Final.*—Theory and Practice of Medicine and Medical Pathology, Principles and Practice of Surgery, including Surgical Anatomy, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. Should the candidate desire it, he may undergo his entire examination in all the branches at the end of the last session.

Certificates of Honour are awarded annually in all the professional examinations, to candidates who obtain not less than 75 per cent. of the total number of marks.

Scholarships and Medals.—Five scholarships are offered for competition in this school as follows. Three First Year's Scholarships, value 50, 30, and 20 dollars respectively, will be competed for at the close of the first session. Two Second Year's Scholarships are open to competition, at the close of the second winter session, to all students who have taken out their entire primary course at this school; value 50 and 30 dollars respectively. Scholarships are awarded only to the candidates who stand highest in the Honour lists. A gold and two silver medals are open to competition annually, at the close of their last session, by students undergoing examination in the school in the final branches.

Fellowship Diplomas.—Under the authority of the Special Act of the Legislature, incorporating the school, diplomas are awarded at the close of the final examination to candidates whose standing has been sufficiently high to merit them. These diplomas constitute students who obtain them 'Fellows by Examination' of Trinity Medical College, and such 'Fellows' are allowed in Great Britain the same privileges as are there accorded to holders of degrees in Medicine from Colonial Universities, by the Royal College of Surgeons of England, the Royal College of Physicians of London, the Royal College of Surgeons, and the Royal College of Physicians of Edinburgh, and the King's and Queen's College of Physicians of Ireland; and also by the Conjoint Examining Boards in London and in Edinburgh.

Candidates for examination for the School Fellowship Diploma must have passed a recognised matriculation examination, and spent four years in pursuit of medical studies, and attended at least two full courses of primary and two courses of final lectures during either three or four winter sessions. A certificate of good moral character is required.

Appointments open to Students.—The Board of Trustees of the Toronto General Hospital annually appoint three students of the college as hospital assistants. The members of the Faculty who belong to the acting hospital staff each appoint two or more students to act as clinical clerks and dressers, whose duties are to take notes of the cases under treatment, and to carry out such directions as they may receive from the professors. These positions are tenable for three months.

There are appointed annually two students who have distinguished themselves as anatomists, as prosectors, to prepare the material required for the lectures on Anatomy; also two assistants to aid the demonstrators, and two assistants in physiological demonstration.

Fees.—The following are the fees:—Anatomy, Surgery, Practice of Medicine, Obstetrics, Materia Medica, Physiology, General Chemistry, Clinical Medicine, and Clinical Surgery, 12 dollars each; Practical Anatomy, Practical Chemistry, Normal Histology and Pathological Histology, 8 dollars each; Medical Jurisprudence, 6 dollars; Botany and Sanitary Science, 5 dollars each; Registration, payable once only, 5 dollars. Optional Branches—Surgical Appliances, Pharmacy, Zoology, and Medical Psychology, 5 dollars each. All students who pay the fees for two full courses of lectures in any branch are entitled to a perpetual ticket for that branch, except Practical Anatomy, Practical Histology, Normal or Pathological, and Practical Chemistry, every course of which must be paid for. Botany and Sanitary Science are charged for once only. All fees must be paid in advance. The fees for the College Examination are for each 5 dollars. Hospital fees—Toronto General Hospital, perpetual, 20 dollars; Lying-in Hospital, six months, 5 dollars.

FACULTY OF MEDICINE OF McGILL UNIVERSITY, MONTREAL.

THE Faculty consists of the following professors and lecturers:—Sir William Dawson, C.M.G., LL.D., F.R.S., Principal and Professor of Natural History; Dr. Robert Craik, Dean of the Faculty and Professor of Hygiene and Public Health. *Emeritus Professors;* Dr. William Wright (Materia Medica); Dr. Duncan C. MacCallum (Midwifery). *Professors;* Dr. G. E. Fenwick (Surgery); Dr. G. P. Girdwood (Chemistry); Dr. George Ross (Medicine); Dr. Thomas G. Roddick (Clinical Surgery); Dr. William Gardner (Gynæcology); Dr. Francis J. Shepherd (Anatomy); Dr. Frank Buller (Ophthalmology and Otology); Dr. James Stewart (Pharmacology and Therapeutics); Dr. George Wilkins (Medical Jurisprudence; also Lecturer on Histology); D. P. Penhallow, B.Sc. (Botany); Dr. R. L. Macdonnell (Clinical Medicine); Dr. Wesley Mills (Physiology); Dr. James C. Cameron (Midwifery and Diseases of Infancy). *Demonstrators, Instructors, &c.:* Dr. R. F. Ruttan (Chemistry); Dr. William R. Sutherland (Anatomy, and Curator of the Museum); Dr. George W. Major (Laryngology); Dr. Alex. D. Blackader (Diseases of Children); Dr. Wyatt G. Johnston (Pathology); Dr. James Bell (Clinical Surgery); Dr. T. Johnson Alloway (Gynæcology); Dr. F. G. Finley (Anatomy).

The Matriculation Examination comprises the following subjects: 1. English Language, including Grammar and Composition. 2. English History. 3. Modern Geography. 4. Latin, including Translation from the original and Grammar. 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof. 6. Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics, and Hydrostatics. 7. One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry. Graduates in Arts, or students having matriculated in Arts in any University in her Majesty's dominion, are not required to submit to the Matriculation Examination, and the preliminary examinations in general education of the following bodies are accepted in lieu of the matriculation: Colleges of Physicians and Surgeons, Ontario and Quebec, New Brunswick Medical Board, Manitoba Medical College.

The complete course of study in Medicine extends over four sessions of six months each, and one summer session of three months in the third academic year, and leads to the degrees of Doctor of Medicine and Master of Surgery. Candidates for these degrees must be 21 years of age, must have studied medicine four years, must have attended lectures for a period of at least four six months' sessions and one three months' summer session (to be taken after the third winter session) in this University or some other University College or School of Medicine approved of by this University, and must pass the necessary examinations. The fee for the degree of Doctor of Medicine and Master in Surgery shall be 30 dollars, to be paid by the successful candidate immediately after examination.

Candidates for Final Examination shall furnish testimonials of attendance on the following branches of Medical Education, viz.:—Anatomy, Practical Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Clinical Medicine, Clinical Surgery, of which two courses will be required of six months' duration; Medical Jurisprudence, of which one course of six months, or two courses of three months will be required; Practical Chemistry, Botany or Zoology, Hygiene, of which one course will be required of three months' duration; Histology, ten lectures and twenty-five demonstrations; General Pathology, twenty-five lectures. The candidate must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other hospital approved of by this University, and have compounded medicines for six months. He must also give proof by ticket of having attended for at least six months the practice of the University or other Lying-in Hospital approved of by this University, and of having attended at least six cases of labour.

No one will be permitted to become a candidate for examination who shall not have attended at least one session of this University and one full course of all the branches included in its curriculum. The examinations at the close of each session are arranged as follows: *First Year.*—Pass Examination in Botany and Histology. Sessional Examination in Anatomy, Chemistry, and Physiology. A maximum of one hundred marks will be allowed for the Sessional Examination in each subject, which marks shall be reckoned in the ranking of the candidate after the examination of the following year. *Second Year.*—Pass Examination in Anatomy, Chemistry, Practical Chemistry, and Physiology. Sessional Examination in Pharmacology and Therapeutics. One hundred marks will be allowed for the Sessional Examination, which marks shall be reckoned in the ranking of the candidate after the examination of the following year. *Third Year.*—Pass Examination in Pharmacology and Therapeutics, Medical Jurisprudence, Hygiene, and Pathology. *Fourth Year.*—Pass Examination in Medicine, Surgery, Obstetrics, Clinical Medicine, Clinical Surgery. By means of the above arrangement a certain definite amount of work must be accomplished in each year, and an equitable division is made between the primary and final branches.

The fifty-seventh session will commence on Oct. 1, and will be continued for six months; this will be followed by a Summer Session, commencing on April 9, and lasting twelve weeks.

The Primary subjects are now all taught practically as well as theoretically. For the department of Anatomy, besides a commodious and well-lighted dissecting-room, there is a special anatomical museum and a bone-room. The other branches are also provided with large laboratories for practical courses. There are a Physiological Laboratory, well stocked with modern apparatus; a Histological Laboratory, supplied with thirty-five microscopes; a Pharmacological Laboratory, furnished with the necessary appliances for the practical teaching of pharmacy; a large Chemical Laboratory, capable of accommodating 76 students at work at a time. Besides these, there is a pathological Laboratory, well adapted for its special work, and associated with it is a suite of rooms exclusively devoted to the study and culture of bacteria, furnished with a complete outfit of the best modern apparatus for this purpose.

The new building of the Medical Faculty, which was opened in 1885, is one of the most complete structures of its kind. Besides the Laboratories, there are two large lecture-rooms capable of seating 300 students each, also a demonstrating-room for a smaller number. There is also a Library of over 10,000 volumes, and a Museum, as well as Reading-rooms for the students.

Matriculation.—Students from Ontario and Quebec are advised to pass the Matriculation Examination of the Medical Councils of their respective Provinces before entering upon their studies. Students from Maritime Provinces, Manitoba, or British Columbia, must present themselves for the Matriculation Examination of the University on the first Friday in October or the last Friday of March.

The Montreal General Hospital is the most extensive clinical field in the Dominion. Last year's report shows that 2,545 Medical and Surgical cases were treated in the wards, and the great proportion of these were acute cases, as may be gathered from the fact that the average duration of residence was only 23·6 days. The number of outdoor patients that are treated in the Hospital averages from 80 to 90 daily. Operations are performed on the eye by the ophthalmic surgeon, after the outdoor patients have been seen, and students are invited to attend the same.

There are special departments in the hospital for Gynæcology and Laryngology, presided over by specialists in these branches. The plan of teaching practical Gynæcology for the past five years with marked success has been the limitation of a number of students to two or three, who, in rotation, assist at the examinations, and receive instruction in the diagnosis and treatment of uterine diseases and the use of gynæcological instruments. Two additional special clinics have recently been instituted in connection with the Outdoor Department, one for Diseases of Children, and the other for Diseases of the Nervous System.

Clinical clerks in both medical and surgical wards are appointed every three months, and each one during his term of service conducts, under the immediate direction of the Clinical Professors, the reporting of all cases in the ward allotted to him. They will be awarded on application at the end of each session to final students of the year, in order of their standing in the primary examination. Dressers are also appointed to the Surgical wards and to the Outdoor Department. For these appointments application is to be made to the Professor of Clinical Surgery, and to the Assistant Surgeons.

At the Montreal Dispensary 12,000 patients are treated yearly. The cases are of great variety, comprising a large number of pulmonary affections and children's diseases. Minor operations are of daily occurrence, and students are furnished with all possible facilities.

The Montreal Maternity has recently been much enlarged. The institution is under the direct supervision of the Professor of Midwifery, who devotes much time to individual instruction. Students who have attended one course of lectures are furnished with cases in rotation, which they are required to report and attend till convalescence. Two resident Accoucheurs are appointed yearly from the graduating class to hold office for a period of six months each. By an arrangement with the authorities of the Montreal General Hospital one of the residents acts as clinical assistant to the Gynæcologists for a period of months.

The fees, arranged according to years, are as follows:—First year, 69 dollars; second year, 97 dollars; third year, 97 dollars; fourth year, 65 dollars; Hospital Ticket, 20 dollars; Lying-in Hospital (six months), 8 dollars; Matriculation, 5 dollars; Graduation, 30 dollars. The total Collegiate and Hospital expenses, spread over four years, amount to 416 dollars.

BISHOP'S COLLEGE UNIVERSITY FACULTY OF MEDICINE, MONTREAL.

THE Faculty consists of the following professors and teachers: Dr. F. W. Campbell (Principles and Practice of Medicine); Dr. J. B. Edwards (*Emeritus*, Practical Chemistry); Dr. R. A. Kennedy (*Emeritus*, Obstetrics and Diseases of Children); Dr. J. Perrigo (Surgery); Dr. J. B. McConnell (Materia Medica and Therapeutics); Dr. Casey A. Wood (Pathology); Dr. G. E. Armstrong (Physiology); Dr. H. L. Reddy (Obstetrics); Dr. D. Gaherty (Hygiene); Dr. E. H. Trenholme (Gynæcology); Dr. G. B. Rowell (Anatomy); Dr. A. L. Smith (Medical Jurisprudence); Rev. J. B. Saunders, M.D. (Botany); Mr. J. T. Donald (Chemistry); Dr. A. Proudfoot (Ophthalmology and Otology); also the following lecturer, Mr. J. Bemrose (Practical Chemistry).

This University confers the degrees of Doctor of Medicine and Master of Surgery. The degree of Master of Surgery (C.M.) is not conferred on any person who does not at the same time obtain the degree of Doctor of Medicine (M.D.). Each student must undergo, prior to the commencement of his medical studies, a Preliminary Examination upon the following subjects:—English, French, Latin, Arithmetic, Algebra, Geometry, History, Belles-Lettres, and one of the following optional subjects: Greek, Natural and Moral Philosophy. Candidates for degrees must have been engaged uninterruptedly for four years in medical and surgical study; but a certificate of having studied one full year with a duly licensed practitioner reduces the period of study at the University to three sessions. Students must matriculate afresh at the commencement of every session, on or before the 1st of December. Every candidate for graduation must be 21 years of age, and must give evidence by certificates of having attended: 1. Two six-months' courses of lectures on each of the following subjects: (*a*) General or Descriptive Anatomy, Practical Anatomy, Surgery, Medicine, Midwifery and Diseases of Women and Children, Chemistry, Materia Medica, and Therapeutics, Physiology, Clinical Medicine, and Clinical Surgery; (*b*) One six months' course or two three-months' courses of Medical Jurisprudence, one six-months' course of Pathology, one three-months' course of Botany, of Hygiene, and also of Practical Chemistry and Microscopy, and also a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology; Clinical Medicine and Clinical Surgery; courses of Practical Anatomy; (*c*) For the last eighteen months, or three periods of six months each, the medical and surgical practice of a hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons; for at least six months compounding and dispensing medicines; at least six cases of midwifery.

Of the four years of medical and surgical study, one full course on each branch mentioned in sections *a* and *b* must be attended in this University.

Every candidate is examined both in writing and *vivâ voce*. The Examinations are divided into Primary and Final. The Primary Examination comprehends Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, and Botany or Zoology. The Final Examination includes Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathology, and Hygiene.

Candidates may be admitted to examination on the Primary branches at the end of the third year of their study. The Final Examination does not take place until the candidate has completed his fourth year.

The session of the Faculty opens in October. Students may attend the practice of either the Montreal General Hospital (200 beds) or of the Hôtel-Dieu Hospital (200 beds). At the Montreal General Hospital facilities are afforded for the study of Practical Pathology, under the direction of the Pathologist of the Hospital. The practice of the Montreal Dispensary is open to the students of Bishop's College. The Women's Hospital, under the supervision of the Faculty, is divided into two departments—Obstetrical and Gynæcological. The Gynæcological Department is attended by the Professors of Bishop's College. Two gold medals (the 'Wood' and the 'Robert Nelson' gold medals) and the 'Dr. David' Scholarship are competed for annually.

Fees.—The fees for the classes of Pathology, Hygiene, Botany, and Practical Anatomy, are 6 dollars each; Medical Jurisprudence, 10 dollars; Practical Histology, 16 dollars; all other classes, 12 dollars each. Degree of Doctor of Medicine and Master in Surgery, 20 dollars; Registration Fee, 1 dollar.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

All persons, whatever qualifications they may possess, must be examined by this College in order to obtain a licence to practise in the province of Ontario.

Candidates for the membership of this College must spend four years (forty-eight months) in professional studies after having passed a Matriculation Examination in the English Language, Arithmetic, Algebra (including simple Equations), Geometry (first two books of Euclid), Latin (Translation and Grammar), and either Greek, French, German, or Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts, or students who have matriculated in Arts in any University in the British dominions, are not required to pass the Matriculation Examination; and Graduates in Arts may pass the Final Examination at the end of three years.

Every candidate must have attended, in a University, college, or school of medicine, two courses of six months each (each course consisting of not less than 100 lectures) in Anatomy, Practical Anatomy, Physiology, Theoretical Chemistry, Materia Medica and Therapeutics, Medicine, Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine and Clinical Surgery; two courses, of three months each, in Medical Jurisprudence; one course of three months in Practical Chemistry, including Toxicology and Botany; one course of twenty-five demonstrations on Natural Histology, and a similar course on Pathological Histology; and one course of twenty lectures on Sanitary Science.

Before being admitted to the Final Examination the candidate must have spent six months in compounding medicines, have attended the practice of a general hospital for twenty-four months, have attended six courses of Midwifery, and have attained the age of twenty-one years.

The Professional Examination is divided into primary and final. The Primary Examination, at the end of the second winter session, comprises Descriptive Anatomy, Physiology and Histology, Theoretical and Practical Chemistry, Toxicology, Materia Medica and Therapeutics, and Botany. The Final Examination comprises Medical and Surgical Anatomy, Theory and Practice of Medicine, Medical and Surgical Pathology, Surgery and Operative Surgery, Midwifery and Diseases of Women and Children, Operative Midwifery, and Medical Jurisprudence.

Any candidate who passes in three or more branches, but fails in the others, is required to pass in the latter only at a subsequent examination.

Students from recognised colleges outside the provinces of Ontario and Quebec must pass the matriculation examination, and afterwards attend one full winter course of lectures during two winter sessions in some one of the Ontario Medical Schools, and such other course or courses as may be necessary to complete the required curriculum; and must pass all the examinations.

The fees are:—Registration of Matriculation Examination, 20 dollars; Primary Examination, 20 dollars; Final Examination, including Registration, 30 dollars. Unsuccessful candidates are admitted to one subsequent examination without additional payment.

MEDICAL FACULTY OF DALHOUSIE UNIVERSITY, HALIFAX.

This institution was organised in 1867, incorporated as the Halifax Medical College in 1876, and reorganised under its present title in 1885.

Candidates for medical degrees must give evidence of having received a satisfactory general education before entering upon the course of study qualifying for the degrees, by passing either one or other of the matriculation examinations of this Faculty, or some other examination recognised by the Senate as sufficient. The lower matriculation examination satisfies the requirements of the General Medical Council of Great Britain as to the preliminary examination which must be passed by persons wishing to register as medical students, and a certificate of having passed enables the holder thereof to register as a medical student in Great Britain. The higher examination satisfies the requirements of the University of Edinburgh in the same respect. Certificates will be issued to candidates showing the subjects in which they passed, and the extent to which their knowledge of these subjects was tested. A certificate of the possession of a University degree in Arts or of having passed the matriculation examination of the Provincial Medical Board of Nova Scotia shall be considered by this University sufficient evidence of satisfactory general education.

Candidates for the degree of M.D. and C.M. must pass two examinations—the Primary and the Final Examinations.

Primary Examination.—Candidates must produce certificates: (1) of having passed the matriculation examination, or other examination recognised as sufficient, at least two academic years previously, and of having completed their sixteenth year at the date of passing the said examination; (2) of having, after passing the matriculation or other equivalent examination, attended in the Halifax Medical College or in some school of medicine approved by the Senate, two courses of 100 lectures each, in each of the following subjects, viz., Anatomy, Chemistry, Materia Medica, and Physiology; and two courses of instruction of the same duration in Practical Anatomy, in the course of which they shall have dissected the whole body at least twice; (3) of having, after passing the matriculation examination, attended either in this University in the Halifax Medical College, or in some other university or college, approved by the Senate, one course of instruction of fifty lessons each in Botany and in Practical Chemistry; (4) either of having, after passing the matriculation examination, attended at the Halifax Medical College or at some college approved by the Senate, one course of instruction of fifty lessons in Practical Pharmacy, or of having had three months' practice in the dispensing of drugs with a recognised apothecary or dispensing medical practitioner. Candidates must pass written and oral examinations in Chemistry (including Practical Chemistry), Botany, Anatomy (including Practical Anatomy), Physiology, and Materia Medica (including Practical Pharmacy). Candidates may appear for examination in Botany one academic year after passing the matriculation examination.

Final Examination.—Candidates for this examination must furnish certificates—(1) that they have completed their twenty-first year or that they will have done so on or before the day of graduation (this certificate shall be signed by themselves); (2) of having passed the primary examination at this University, or at the Halifax Medical College prior to its affiliation with this University, or of having been admitted to the standing of an undergraduate who has passed this examination on certificates from recognised medical schools; (3) of either (*a*) having attended during four academic years at least two courses of lectures per year in subjects of the primary and final examination either in this University or at the Halifax Medical College, or at some other recognised medical school, or (*b*) having spent one calendar year in the study of medicine in the office or offices of one or more registered medical practitioners, and having subsequently attended during three academic years courses of lectures as above; (4) of having attended at least two courses of lectures during at least one academic year at the Halifax Medical College, and of having paid the fees for one course of lectures in each of the subjects of the examinations at that college; (5) of having attended, after passing the matriculation examination, at the Halfax Medical College, or at some school of medicine approved by the Senate, two courses of 100 lectures each in each of the following subjects, viz., Surgery, Obstetrics, and Diseases of Women and Children, and Medicine; two courses of lectures, of 50 lectures each, in each of the following subjects, viz., Clinical Medicine and Clinical Surgery; and one course of 50 lectures in Medical Jurisprudence; (6) of having, after passing the matriculation examination, attended during one calendar year the practice of the provincial and city hospital, or that of some other hospital approved by the Senate; (7) of having attended for at least six months the practice of a lying-in hospital, approved by the College, or of having attended at least six cases of midwifery, under a recognised practitioner; (8) of having obtained proficiency in the practice of vaccination under a recognised practitioner. Candidates must pass written and oral examinations in the following subjects:—Principles and Practice of Medicine, Obstetrics and Diseases of Women and Children, Principles and Practice of Surgery, and Medical Jurisprudence. The oral examinations in Medicine and Surgery shall include clinical examinations conducted at the bedside, cases being submitted for diagnosis and treatment. Candidates may appear for examination in Medical Jurisprudence alone, three academic years after passing the matriculation examination, on presentation of the certificates specified above so far as they apply to this subject.

The examinations are held in the third week of April. Candidates must transmit the certificates to the Secretary of the Senate at least fourteen days before the date of the examination, enter their names in the register of undergraduates before the date of examination, and pay on registration one-half of the graduation fee. Should the candidate fail to pass, the fee will not be returned to him; but he will be admitted to any one subsequent examination without fee.

Fees.—The following fees are payable in all cases in advance:—Registration, 2 dollars; Matriculation Examination, 10 dollars; Chemistry Class, 12 dollars; Chemistry Laboratory (three months' course), 6 dollars; Botany Class, 6 dollars; Graduation, 20 dollars.

AUSTRALASIA.

LAWS REGULATING THE PRACTICE OF MEDICINE.

The following is a summary of the chief laws regulating the practice of Medicine in the Australasian Colonies.

New South Wales.—Any person who shall prove that he has had a regular course of medical education of not less than three years' duration, and, after due examination, has received a degree from the University of Sydney, or a degree or diploma from any other body duly recognised in the country to which the applicant belongs, and entitling him to practise therein, shall be deemed to be a legally qualified medical practitioner, and shall be entitled to a certificate from the Medical Board.

New Zealand.—The holders of British and Irish degrees, diplomas, and licences registrable under any Act of the Imperial Parliament; persons who have received in any country a degree or diploma entitling them to practise Medicine or Surgery; and duly qualified Medical Officers of the Army and Navy are entitled to be registered. Every applicant must give notice of his intention to the Registrar, and produce his diploma or other evidence of qualification. The notice of application shall be published in a newspaper; and the Registrar, if he see fit after examination, may refuse to enter the name of the applicant. The fees payable are: On deposit of evidence of qualification, £1; certificate of registration, 5*s*. For alteration of qualification in the Register, the fee is 10*s*.; for any other alteration in the Register, 5*s*.

Queensland, South Australia, Tasmania, Victoria.—The conditions under which qualified practitioners can be registered are in general similar to those above described.

UNIVERSITIES GRANTING DEGREES IN MEDICINE.

THE Universities in Australasia, and the degrees in Medicine and Surgery which they grant, are: Sydney (New South Wales)—Bachelor of Medicine, Doctor of Medicine, and Master of Surgery; Otago (New Zealand)—Bachelor and Doctor of Medicine; Adelaide (South Australia)—Bachelor of Medicine; Melbourne—Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master of Surgery.

Medical Schools providing for a complete curriculum of professional study are attached to the Universities of Sydney, Otago, and Melbourne. The Medical School of the University of Adelaide, which was opened in 1885, provides only instruction in the elementary subjects—Natural Science, Chemistry, Anatomy, and Physiology.

TEXT-BOOKS.

IN every medical school certain text-books are preferred above others, and it is generally advisable for the student to purchase those which are most widely read in his school. He should not spend any money on books until he has chosen and entered the institution where he intends to pursue his studies. There his future teachers and fellow-students will be able to afford him the necessary information. The student need not put himself to expense in order to procure works of high cost, as such publications are generally to be found in the library of his hospital. The subjoined notes may serve to inform the student in general terms of the works which he may use as text-books. The list is not intended to be exclusive, nor can we undertake to decide which book is the best on any subject. Some students learn most readily from one book, some from another. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied with advantage.

ANATOMY AND PHYSIOLOGY.

THE student will always require a systematic work on anatomy and a manual for the dissecting-room. There are also some special works on that science which it is advisable for him to procure. Among them are Mr. Luther Holden's *Human Osteology* (seventh edition, J. & A. Churchill). The same firm publishes a *Student's Guide to Osteology*, by Mr. Wagstaffe. There is also Mr. Norton's *Osteology for Students* (Baillière, Tindall, & Co.). The anatomy of the joints is very completely described in Mr. Henry Morris's *Anatomy of the Joints of Man.* For the early study of anatomy Mr. St. George Mivart's *Elementary Lessons in Anatomy* (Macmillan & Co.) will be found instructive. Among the indispensable text-books treating of human anatomy as a whole are Quain's *Elements of Anatomy*, ninth edition, by Dr. Allen Thomson, Mr. Schäfer, and Mr. Thane; Gray's *Anatomy*, eleventh edition, by Mr. Pick (Longmans & Co.); and Wilson's *Anatomist's Vade-Mecum*, tenth edition, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow (J. & A. Churchill). For use in the dissecting-room, Ellis's *Demonstrations of Anatomy* (tenth edition, Smith, Elder, & Co.) has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections*, a more costly work which is most valuable for reference. Other good books for dissectors are Mr. Christopher Heath's *Practical Anatomy* (seventh edition, J. & A. Churchill); Dr. Carrington's *Manual of Dissections of the Human Body* (second edition, revised and enlarged by Mr. Arbuthnot Lane, George Bell & Sons); Holden & Langton's *Manual of Dissection* (fifth edition, J. & A. Churchill); Dr. Cleland's *Directory for the Dissection of the Human Body* (third edition, Smith, Elder, & Co.); and a *Dissector's Guide*, with illustrations, by Dr. D. J. Cunningham (Maclachlan & Stewart). The first part of the *Manual of Practical Anatomy*, by Dr. Cossar Ewart (Smith, Elder, & Co.), has appeared. Messrs. Hensman & Fisher's *Anatomical Outlines for the Use of Students in the Dissecting-Room and Surgical Class-Room* (Longmans & Co.) are useful. Treves's *Surgical Applied Anatomy* (Cassell & Co.) and Curnow's *Medical Applied Anatomy* are good text-books. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy (J. & A. Churchill), is a valuable book of reference. The drawings are made from plane sections of bodies. There are also Professor W. Turner's *Atlas of Human Anatomy* (A. Johnston); Bock's *Atlas of Human Anatomy* (Renshaw); Mr. Godlee's *Atlas of Human Anatomy* (J. & A. Churchill); and Allen & Shakespeare's *System of Human Anatomy* (Henry Kimpton); also Professor Flower's *Diagrams of the Nerves of the Human Body* (third edition, J. & A. Churchill); and a *Student's Atlas of Bones and Segments*, by Mr. Cathcart and Mr. Caird (W. & A. K. Johnston). *A Descriptive Atlas of Anatomy*, by Mr. Noble Smith, is published by Smith, Elder, & Co. There are also the well-known *Quain and Wilson's Anatomical Plates* (Smith, Elder, & Co.). Mr. Thomas Cooke's *Tablets of Anatomy and Physiology* (second edition) contain much information in a condensed form, and give useful aid in the study of the larger works. To students interested in the study of Zoology and Comparative Anatomy we would recommend, as works that will give much information without being too large or costly, Professor Flower's *Osteology of the Mammalia* (Macmillan & Co.), and Dr. H. A. Nicholson's *Manual of Zoology* and *Advanced Text-book* *of Zoology* (seventh edition, Blackwood); as well as Huxley's *Manuals of the Anatomy of Vertebrated and Invertebrated Animals* (J. & A. Churchill); Huxley and Martin's *Practical Biology*; Dr. Macalister's *Manuals of Zoology of the Invertebrate and of the Vertebrate Animals* (Longmans & Co.); and Mr. F. J. Bell's *Manual of Comparative Anatomy and Physiology* (Cassell & Co.). Professor Gegenbauer's *Elements of Comparative Anatomy*, translated by Mr. F. J. Bell (Macmillan & Co.), is a very complete work. For the study of Embryology, the chapter by Dr. Allen Thomson in Quain's *Anatomy*, or the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour (second edition, Macmillan & Co.), should be consulted. The subject has been most ably treated by the late Mr. Balfour in a *Treatise on Comparative Embryology* (Macmillan & Co.). Professor A. C. Haddon's *Introduction to the Study of Embryology* (Griffin & Co.) is one of the newest and best text-books for the student of that science.

For instruction in Histology, Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, & Co.); Mr. Schäfer's *Essentials of Histology* (second edition, Longmans, Green, & Co.); Dr. Stirling's *Text-book of Practical Histology* (Smith, Elder, & Co.); Dr. Klein's *Elements of Histology* (third edition, Cassell & Co.); and Dr. Heneage Gibbes' *Practical Histology and Pathology* (second edition, H. K. Lewis) are excellent guides; as are also the chapter on General Anatomy in Quain's *Anatomy*, and Dr. Rutherford's *Outlines of Practical Histology* (J. & A. Churchill). The *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith (Smith, Elder, & Co.), is a valuable work for reference. Other works which will be found useful are Professor Stricker's collection of essays on *Human and Comparative Histology* (New Sydenham Society); Heinrich Frey's *Histology and Histo-chemistry of Man*, translated by Mr. Barker (J. & A. Churchill); and Dr. Satterthwaite's *Manual of Histology* (Sampson Low & Co.).

In Physiology, the beginner will find trustworthy guides in Huxley's *Lessons in Elementary Physiology* and Huxley and Martin's *Elementary Biology* (both published by Macmillan & Co.); and, as text-books for use in medical schools, Dr. McKendrick's *Outlines of Physiology in Relation to Man* (Maclehose, Glasgow; and Macmillan & Co.); Kirkes's *Handbook of Physiology*, edited by Mr. Morrant Baker and Dr. V. D. Harris (twelfth edition, John Murray), very popular in London Medical Schools; Dr. Michael Foster's *Text-book of Physiology* (fifth edition, Macmillan & Co.); Dr. Gerald Yeo's *Manual of Physiology* (second edition, J. & A. Churchill); and Mr. Power's *Manual of Human Physiology* (Cassell & Co.) are to be recommended; and, for more advanced students, Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (second edition, Smith, Elder, & Co.); Flint's *Text-book of Human Physiology* (H. K. Lewis); Dr. Landois' *Text-book of Human Physiology*, translated by Dr. Stirling (third English edition, C. Griffin & Co.); and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power (ninth edition, J. & A. Churchill). Dr. Pye-Smith's *Syllabus of a Course of Lectures on Physiology* (J. & A. Churchill) will be found useful for self-examination. For instruction in Practical Physiology, Dr. Burdon Sanderson has prepared a manual of *Practical Exercises in Physiology* (second edition, H. K. Lewis). *An Elementary Course of Practical Physiology*, by Dr. M. Foster and Mr. Langley (Macmillan & Co.), is also a book that can be recommended to beginners; while the elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (J. & A. Churchill), is more fitted for those who desire an extended knowledge of practical physiology.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (sixth edition, J. & A. Churchill); Wythe's *Microscopist's Manual* (third edition, J. & A. Churchill); Marsh's *Microscopical Section Cutting* (second edition, J. & A. Churchill); Martin's *Manual of Microscopic Mounting* (second edition, J. & A. Churchill); and A. B. Lee's *Microscopist's Vade-Mecum* (J. & A. Churchill).

CHEMISTRY.

In Chemistry, among the most approved text-books are Fownes' *Manual of Chemistry*, edited, in two volumes, *Inorganic* and *Organic*, by Mr. Watts (thirteenth edition, J. & A. Churchill); Roscoe's *Lessons in Elementary Chemistry*; Miller's *Elements of Chemistry* (Longmans & Co.); Bloxam's *Chemistry, Inorganic and Organic* (fifth edition, J. & A. Churchill); Williamson's *Chemistry for Students* (Macmillan & Co.); Tidy's *Handbook of Modern Chemistry* (J. & A. Churchill); and Frankland and Jopp's *Inorganic Chemistry* (J. & A. Churchill). An elaborate *Treatise in Chemistry*, by Professors Roscoe and Schorlemmer, of Owens College, Manchester, is published by Macmillan & Co. For Practical Chemistry there is a work by Mr. Bloxam on *Laboratory Teaching* (fifth edition, J. & A. Churchill); and one on *Experimental Chemistry*, by Dr. J. E. Reynolds (Longmans & Co.). Bowman and Bloxam's *Practical Chemistry* (eighth edition, J. & A. Churchill) has an established reputation as a practical guide. There is also a little work by Dr. J. C. Brown on *Practical Chemistry* (J. & A. Churchill).

For instruction in Physiological and Medical Chemistry, there are Dr. T. C. Charles's *Elements of Physiological and Pathological Chemistry* (Smith, Elder, & Co.); and Dr. Ralfe's *Clinical Chemistry* (Cassell & Co.). As guides in the examinations of urine, there are Dr. Wickham Legg's *Guide to the Examination of the Urine* (sixth edition, H. K. Lewis); Dr. G. Oliver's *Bedside Urine Testing* (third edition, H. K. Lewis); and Dr. Whittaker's *Student's Primer on the Urine* (J. & A. Churchill). A second edition of Dr. Thudichum's *Pathology of the Urine* is published by J. & A. Churchill.

BOTANY.

Among text-books of Botany, Bentley's *Student's Guide to Structural, Morphological, and Physiological Botany* (fourth edition, J. & A. Churchill); Bentley's *Systematic Botany* (Churchill); Henfrey's *Elementary Course of Botany*, fourth edition, by Dr. M. T. Masters (Gurney & Jackson); Balfour's *Manual of Botany* (A. & C. Black); Oliver's *Lessons in Elementary Botany* (Macmillan & Co.); Thome's *Botany*, translated by Bennet; Behrens' *Text-book of General Botany*, translated by Mr. P. Geddes (Y. J. Pentland); T. W. Shore's *Elementary Practical Biology, Vegetable* (J. & A. Churchill); and Prantl and Vine's *Text-book of Botany*, are all of value to the student. Sachs' *Text-book of Botany*, translated by Mr. A. W. Bennett and Mr. W. T. Dyer (Macmillan & Co.), is a valuable work of reference in regard to Structural and Physiological Botany. Bentley and Trimen's admirable plates of *Medicinal Plants* (J. & A. Churchill) should be consulted by the student both of Botany and Materia Medica.

MATERIA MEDICA AND THERAPEUTICS.

A WELL-KNOWN and useful book as a manual of Materia Medica is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Tirard (twelfth edition, Longmans & Co.). It requires, however, to be supplemented by a treatise on Therapeutics, for which purpose Dr. Ringer's *Handbook of Therapeutics* (twelfth edition, H. K. Lewis); Dr. Waring's *Manual of Practical Therapeutics* (fourth edition, J. & A. Churchill); and Dr. Farquharson's *Guide to Therapeutics* (fourth edition, Smith, Elder, & Co.), must be consulted. Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (second edition, Macmillan & Co.) will be of value to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (sixth edition, Smith, Elder, & Co.) pays special attention to the therapeutic action of drugs. Other useful books are Dr. Lauder Brunton's *Text-book of Pharmacology, Therapeutics, and Materia Medica* (third edition, Macmillan & Co.); Dr. W. G. Smith's *Commentary on the British Pharmacopœia* (Smith, Elder, & Co.); Royle and Harley's *Manual of Materia Medica and Therapeutics* (sixth edition, J. & A. Churchill); Neligan's *Medicines*, edited by Mr. R. Macnamara (Fannin & Co.); Professor Bentley's *Organic Materia Medica* (Longmans, Green, & Co.); Dr. Phillips's *Materia Medica and Therapeutics* (new edition, J. & A. Churchill); Dr. Whitla's *Pharmacy, Materia Medica, and Therapeutics*, fifth edition (Renshaw); Dr. Mitchell Bruce's *Manual of Materia Medica and Therapeutics* (Cassell & Co.); Dr. Scoresby-Jackson's *Note-book of Materia Medica*, edited by Dr. Moinet (fifth edition, Maclachlan & Stewart; and Simpkin, Marshall, & Co.); Dr. Handsel Griffith's *Materia Medica and Pharmacy*, third edition, edited by Mr. Alfred Gubb (Baillière, Tindall, & Cox; and Fannin & Co., Dublin); Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (fifth edition, H. K. Lewis); Dr. Thorowgood's *Student's Guide to Materia Medica* (second edition, J. & A. Churchill); and Craig's *Manual of Materia Medica and Therapeutics* (fourth edition, Livingstone, Edinburgh; and Simpkin, Marshall, & Co.). Dr. F. T. Roberts's *Officinal Materia Medica* (second edition, H. K. Lewis); and Dr. Isambard Owen's manual of *Materia Medica* (second edition, J. & A. Churchill), are highly recommended. Dr. Lauder Brunton's *Tables of Materia Medica* (new edition, Smith, Elder, & Co.) form a most comprehensive and valuable syllabus, and will be very useful to the student. Dr. W. H. Griffith's *Lessons on Prescriptions, and the Art of Prescribing* (Macmillan & Co.) is a useful work.

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medicinal Electricity* (Longmans & Co.), the following are likely to prove useful to students:—a *Text-book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder, & Co.); a *Handbook of Medical and Surgical Electricity*, and *How to Use a Galvanic Battery*, by Dr. H. Tibbits (second edition, J. & A. Churchill); Dr. A. de Watteville's *Practical Introduction to Medical Electricity* (second edition, H. K. Lewis); and his translation of Erb's *Electro-Therapeutics*, which forms vol. vi. of Ziemssen's *Handbook of General Therapeutics* (Smith, Elder, & Co.); Dr. Roberts Bartholow's *Medical Electricity* (Kimpton); and Dr. Hughes Bennett's *Electro-Diagnosis in Diseases of the Nervous System* (Lewis).

PATHOLOGY.

As a manual of Pathology, Dr. T. H. Green's and Mr. Stanley Boyd's *Introduction to Pathology and Morbid Anatomy* (seventh edition, Renshaw) has gained a deservedly high reputation. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon (third edition, J. & A. Churchill); Dr. J. F. Payne's *Manual of General Pathology* (Smith, Elder, & Co.); the same author's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy* (J. & A. Churchill); Dr. G. S. Woodhead's *Practical Pathology* (second edition, Y. J. Pentland); Dr. J. Coats' *Manual of Pathology* (Longmans, Green, & Co.); and Mr. J. B. Sutton's *Introduction to General Pathology* (J. & A. Churchill), are also good books. A second edition of an English translation of Virchow on *Post Mortem Examinations: the Method of Performing them*, is published by J. & A. Churchill. Messrs. Smith, Elder, & Co. have published a *Manual of Necropsy*, by Dr. A. H. Newth, which is intended as a guide to the performance of *post mortem* examinations. There are also *Surgical Pathology and Morbid Anatomy*, by Mr. A. Bowlby (J. & A. Churchill); a *Manual of Surgical Pathology*, by Mr. A. J. Pepper (Cassell & Co.), and Dr. Macalister's translation of Ziegler's *Text-book of Pathological Anatomy* (Macmillan & Co.). We would also strongly recommend students to consult, and to possess if possible, Rindfleisch's *Manual of Pathological Histology*, edited by the New Sydenham Society. Other highly valuable works for reference are Dr. Greenfield's translation of Lancereaux's *Atlas of Pathological Anatomy* (J. & A. Churchill); a complete English translation by Mrs. Ernest Hart of a *Manual of Pathological Anatomy*, by Cornil and Ranvier (Smith, Elder, & Co.); and Dr. D. J. Hamilton's *Text-book of Pathology*, Vol. I. (Macmillan & Co.).

The interest which has in late years been excited in the study of micro-organisms in their relation to disease has called forth several works, which may be consulted with advantage. Among them may be mentioned Mr. E. M. Crookshank's *Introduction to Practical Bacteriology* (second edition, H. K. Lewis); Mr. Watson Cheyne's Collection of Recent Essays by various authors on Bacteria in Relation to Disease (New Sydenham Society); Professor Senn's *Surgical Bacteriology* (Young J. Pentland); and Professors Cornil and Babes' treatise on *Les Bactéries et leur Rôle dans l'Anatomie et l'Histologie Pathologiques* (F. Alcan, Paris).

MEDICINE.

FOR the student who is commencing his clinical studies there are several very good guide-books. Among them are Dr. A. W. Barclay's *Manual of Medical Diagnosis* (third edition, J. & A. Churchill);

Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (sixth edition, J. & A. Churchill); Dr. Graham Brown's *Manual of Medical Diagnosis* (Bell & Bradfute, and Simpkin, Marshall, & Co.); Dr. Byrom Bramwell's *Practical Medicine and Medical Diagnosis* (Pentland); Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, & Co.); Dr. Finlayson's *Clinical Manual for the Study of Medical Cases* (Smith, Elder, & Co.); and Dr. Warner's *Student's Guide to Medical Case-taking*, second edition (J. & A. Churchill); Dr. Churton's *Method of Case reporting for Clinical Clerks.* More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, & Co.). As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (third edition, Smith, Elder, & Co.) may be safely trusted; also Dr. S. West's *How to Examine the Chest* (J. & A. Churchill). Other useful books for the same purpose are Dr. Flint's *Manual of Percussion and Auscultation* (J. & A. Churchill); and Dr. Reginald Thompson's *Physical Examination of the Chest in Health and Disease* (H. Renshaw).

Among text-books in General Medicine, which may be recommended for the use of the student, are Dr. F. T. Roberts's *Handbook of the Theory and Practice of Medicine* (seventh edition, H. K. Lewis); Dr. Bristowe's *Theory and Practice of Medicine* (sixth edition, Smith, Elder, & Co.); Dr. Angel Money's *Student's Text-book of the Practice of Medicine* (H. K. Lewis); Dr. Tanner's *Practice of Medicine* (edited by Dr. Broadbent, seventh edition, Renshaw); Dr. Aitken's *Science and Practice of Medicine* (seventh edition, C. Griffin & Co.); Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (fifth edition, Smith, Elder, & Co.); Dr. Flint's *Clinical Medicine* (J. & A. Churchill); Dr. Aitken's *Outlines of the Science and Practice of Medicine* (second edition, C. Griffin & Co.); Dr. Flint's *Principles and Practice of Medicine* (fifth edition, Kimpton); Dr. Roberts Bartholow's *Treatise on the Practice of Medicine* (fifth edition, H. K. Lewis); Dr. Charteris's *Student's Guide to the Practice of Medicine* (fifth edition, J. & A. Churchill); Dr. A. Carter's *Elements of Practical Medicine* (fourth edition, Lewis); and the *Principles and Practice of Medicine*, by the late Dr. Hilton Fagge, edited by Dr. Pye-Smith (second edition, J. & A. Churchill). The advanced student and the practitioner will do well to consult Dr. Russell Reynolds' *System of Medicine* (five volumes, Macmillan & Co.); Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society); Ziemssen's *Cyclopædia of the Practice of Medicine* (Sampson Low & Co.); Dr. Niemeyer's *Text-book of Practical Medicine* (H. K. Lewis); and Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans & Co.). Dr. Quain's *Dictionary of Medicine* is also a valuable work for reference.

SURGERY.

Mr. Erichsen's *Science and Art of Surgery* (ninth edition, by Mr. M. Beck, Longmans & Co.); Mr. Holmes's *Surgery—its Principles and Practice* (fifth edition, Smith, Elder, & Co.); Mr. Bryant's *Practice of Surgery* (fourth edition, J. & A. Churchill); and Mr. Gant's *Science and Practice of Surgery* (third edition, Baillière, Tindall, & Cox), are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed publications, there is the well-known Druitt's *Surgeon's Vade-Mecum* (twelfth edition, J. & A. Churchill). Mr. Frederick Treves' *Manual of Surgery* (Cassell & Co.) is a good systematic work on a small scale; and we can also recommend Mr. Walsham's *Surgery, its Theory and Practice* (second edition, J. & A. Churchill). Mr. Christopher Heath has brought out a *Student's Guide to Surgical Diagnosis* (second edition, J. & A. Churchill). There is also a manual of *Surgical Diagnosis*, by Mr. A. P. Gould (Cassell & Co.). Other books which may be consulted with advantage are, Mr. Holmes's and Mr. Hulke's *System of Surgery* (third edition, Longmans & Co.); Mr. Spence's *Lectures on Surgery* (A. & C. Black); Dr. S. D. Gross's *System of Surgery* (sixth edition, Smith, Elder, & Co.); and Billroth's *Lectures on Surgical Pathology and Therapeutics* (H. K. Lewis). Mr. Watson Cheyne's *Antiseptic Surgery*, and his *Manual of the Antiseptic Treatment of Wounds* (Smith, Elder, & Co.), are standard works on the subject of which they treat. Mr. Keetley's *Index of Surgery* (fourth edition, Smith, Elder, & Co.) is a handy work of reference for students and practitioners.

For the guidance of the student who is being instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (seventh edition, J. & A. Churchill) has for several years enjoyed a high reputation. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans & Co.); Mr. Berkeley Hill's *Essentials of Bandaging* (sixth edition, H. K. Lewis); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (third edition, J. & A. Churchill); Mr. Arthur Barker's *Short Manual of Surgical Operations* (Longmans & Co.); Mr. W. Arbuthnot Lane's *Manual of Operative Surgery* (Bell & Sons); Mr. Joseph Bell's *Manual of the Operations of Surgery* (fourth edition, Maclachlan & Stewart); Pye's *Surgical Handicraft* (Trübner & Co.); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. *Surgical Operations*, by Sir W. Mac Cormac (Smith, Elder, & Co.); a *Manual of Regional Surgery*, by Mr. F. A. Southam (J. & A. Churchill), is a useful work; Mr. J. M'Lachlan's *Anatomy of Surgery* (Edinburgh, E. & S. Livingstone); and a *Manual of Operative Surgery*, by Dr. Joseph D. Bryant (Bermingham & Co.), are also good practical works. Other works most valuable for reference are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, &c., illustrating surgical diseases, symptoms, accidents, operations, &c. (published in fasciculi by J. & A. Churchill); Mr. Hutchinson's *Lectures on Clinical Surgery* (J. & A. Churchill); Mr. C. Heath's *Dictionary of Practical Surgery* (second edition, Smith, Elder, & Co.); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates by M. Leveillé (second edition, J. & A. Churchill); Mr. Norton's edition of Bernard and Huette's *Text-book of Operative Surgery* (Baillière, Tindall, & Cox); Dr. Steven Smith's *Manual of the Principles and Practice of Operative Surgery* (Sampson Low & Co.); and Dr. J. Ashhurst's *International Encyclopædia of Surgery* (Macmillan & Co.). Every student should read Hilton's *Rest and Pain* (fourth edition, Bell & Sons), one of the finest works on the passive methods of treatment of surgical diseases in the English language. For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans & Co.), and Surgeon-Major Porter's *Surgeon's Pocket-book* (third edition, C. Griffin & Co.), are essential. A translation, by Mr. Clutton, of Professor Esmarch's *Surgeon's Handbook on the Treatment of Wounded in War* (Sampson Low & Co.) is also a valuable work.

MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

The text-books of Obstetric Medicine which hold the first place in the present day are: Dr. W. S. Playfair's *Treatise on the Science and Practice of Midwifery* (seventh edition, Smith, Elder, & Co.); Drs. Robert and Fancourt Barnes's *System of Obstetric Medicine and Surgery* (Smith, Elder, & Co.); Dr. Galabin's *Manual of Midwifery* (J. & A. Churchill); and Dr. Leishman's *System of Midwifery* (fourth edition, J. Maclehose, Glasgow; and Macmillan & Co.). Every student should have one or other of these. There are also Dr. W. T. Lusk's *Science and Art of Midwifery* (third edition, H. K. Lewis); Dr. Parvin's *Science and Art of Obstetrics* (Pentland); and Cazeaux and Tarnier's *Obstetrics; the Theory and Practice*, translated by Dr. R. J. Hess (H. K. Lewis). For those who prefer smaller books, Dr. D. Lloyd Roberts's *Guide to the Practice of Midwifery* (third edition, J. & A. Churchill) will be useful. There are also Dr. Alfred Meadows's *Manual of Midwifery* (fourth edition, Renshaw); Milne's *Manual of Midwifery* (second edition, Livingstone; and Simpkin, Marshall, & Co.); and Dr. C. H. Carter's translation of Schröder's *Manual of Midwifery* (J. & A. Churchill). As works of illustrations, Dr. Martin's *Atlas of Obstetrics and Gynæcology*, edited by Dr. Fancourt Barnes (H. K. Lewis), Dr. H. Savage's *Female Pelvic Organs* (fifth edition, J. & A. Churchill), and Dr. Berry Hart's *Atlas of Female Pelvic Anatomy* (W. & A. K. Johnston), are to be recommended. Dr. J. G. Swayne's *Obstetric Aphorisms* (ninth edition, J. & A. Churchill) are very useful. Dr. Robert Barnes has issued a *Synoptical Guide to the Study of Obstetrics* (Smith, Elder, & Co.), which will be found valuable as an aid to study. An important department of obstetrics is ably treated in Dr. Fordyce Barker's *Clinical Lectures on Puerperal Diseases* (J. & A. Churchill). Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. & A. Churchill) should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (second edition, J. & A. Churchill). Dr. West's *Lectures on the Diseases of Women* (fourth edition, with additions by Dr. Matthews Duncan, J. & A. Churchill); Dr. Graily Hewitt's *Diagnosis and Treatment of Diseases of Women* (fourth edition, Longmans & Co.); Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women* (third edition, J. & A. Churchill); Professor Winckel's *Diseases of Women*, English translation by Dr. J. H. Williamson (Pentland); Dr. Edis's *Diseases of Women* (second edition, Smith, Elder, & Co.); the late Dr. J. Thorburn's *Practical Treatise on the Diseases of Women* (C. Griffin & Co.); Mr. Lawson Tait's *Diseases of Women* (Williams & Norgate); Dr. Emmet's *Principles and Practice of Gynæcology* (third edition, J. & A. Churchill); Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women* (fifth edition, Kimpton); Dr. Heywood Smith's *Practical Gynæcology* (J. & A. Churchill); Sir T. Spencer Wells's treatise on *Ovarian and Uterine Tumours* (J. & A. Churchill); Mr. Alban Doran's *Handbook of Gynæcological Operations* (J. & A. Churchill); Dr. Tilt's *Handbook of Uterine Therapeutics* (fourth edition, J. & A. Churchill); Dr. Macnaughton Jones's *Manual of Diseases of Women and Uterine Therapeutics* (Baillière, Tindall, & Cox); and Mr. Lawson Tait's *Diseases of the Ovaries*, are all valuable books. Other books which will be found useful are Dr. Galabin's *Student's Guide to Diseases of Women* (fourth edition, J. & A. Churchill); Hart & Barbour's *Manual of Gynæcology* (third edition, Johnston); Dr. Lewers' *Practical Text-book of the Diseases of Women* (H. K. Lewis); Dr. Halliday Croom's *Minor Gynæcological Operations and Appliances* (second edition, Livingstone, Edinburgh; Simpkin, Marshall, & Co.); Dr. Courty's work on the *Diseases of the Uterus, Ovaries, and Fallopian Tubes*, translated by Dr. Agnes Maclaren (J. & A. Churchill); Mr. Alban Doran's *Clinical and Pathological Observations on Tumours of the Ovary, Fallopian Tube, and Broad Ligament* (Smith, Elder, & Co.); and Dr. Atlee's *General and Differential Diagnosis of Ovarian Tumours* (Smith, Elder, & Co.).

Among text-books on Diseases of Children must be mentioned Dr. West's well-known *Lectures on the Diseases of Infancy and Childhood* (seventh edition, Longmans & Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (third edition, Fannin & Co.); Dr. W. H. Day's *Manual on the Diseases of Children* (second edition, J. & A. Churchill); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, & Co.); Meigs and Pepper's *Practical Treatise on the Diseases of Children* (seventh edition, H. K. Lewis); Dr. Eustace Smith's *Practical Treatise on Diseases in Children*, second edition (J. & A. Churchill); Dr. J. L. Smith's *Treatise on the Diseases of Infancy and Childhood* (fifth edition, H. K. Lewis); Dr. Goodhart's *Students' Guide to Diseases of Children* (third edition, J. & A. Churchill); Dr. Tanner and Dr. Meadows' *Practical Treatise on Diseases of Infancy and Childhood* (third edition, H. Renshaw); Dr. Angel Money's *Treatment of Disease in Children* (H. K. Lewis); Mr. Edmund Owen's *Surgical Diseases of Children* (Cassell & Co.); and Steiner's *Compendium of the Diseases of Children*, translated by Mr. Lawson Tait (J. & A. Churchill).

SPECIAL SUBJECTS.

There are several good text-books of the special departments which are taught in the schools.

For students of Psychological Medicine, the chief work is Bucknill and Tuke's *Manual of Psychological Medicine* (fourth edition, J. & A. Churchill). There are also Dr. Clouston's *Clinical Lectures on Mental Diseases* (J. & A. Churchill); Dr. E. C. Mann's *Manual of Psychological Medicine and Allied Nervous Diseases* (J. & A. Churchill); Dr. W. H. O. Sankey's *Lectures on Mental Diseases* (second edition, H. K. Lewis); Dr. Blandford's *Lectures on Insanity and its Treatment* (third edition, Oliver & Boyd; and Simpkin, Marshall, & Co.); Dr. G. H. Savage's *Manual of Insanity and Allied Neuroses* (Cassell &

Co.); and Dr. W. A. Hammond's *Treatise on Insanity* (H. K. Lewis).

For students of Ophthalmic Surgery, Mr. R. B. Carter's *Treatise on Diseases of the Eye* (Macmillan & Co.); Mr. Nettleship's *Student's Guide to Diseases of the Eye* (fourth edition, J. & A. Churchill); Mr. Macnamara's *Manual of Diseases of the Eye* (fourth edition, J. & A. Churchill); Mr. Wharton Jones's *Manual of Ophthalmic Medicine and Surgery* (third edition, J. & A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (fifth edition, Renshaw); Dr. H. W. Williams's *Diagnosis and Treatment and Diseases of the Eye* (Sampson Low & Co.); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder, & Co.); Mr. Juler's *Handbook of Ophthalmic Science and Practice* (Smith, Elder, & Co.); Mr. Higgens' *Hints on Ophthalmic Out-patient Practice* (J. & A. Churchill); Dr. C. F. Pollock's *Normal and Pathological Histology of the Eye* (J. & A. Churchill); and Mr. Swanzy's *Handbook of Diseases of the Eye and their Treatment* (second edition, H. K. Lewis), are books that will be useful. Accommodation has become almost a special subject, which the student must master, especially with a view of thoroughly understanding the value of spectacles in ophthalmic practice. Among the best works on accommodation are Dr. Landolt's *Refraction and Accommodation of the Eye and their Anomalies*, translated by Dr. Culver (Pentland); and Mr. Hartridge's *Refraction of the Eye* (J. & A. Churchill). Dr. de Wecker's *Ocular Therapeutics*, translated by Dr. Litton Forbes (Smith, Elder, & Co.), and Dr. Wolfe's work on *Diseases and Injuries of the Eye* (J. & A. Churchill), may be consulted with advantage. A second edition of a book by Mr. E. A. Browne, for instructing students *How to Use the Ophthalmoscope*, is published by Trübner & Co. A *Manual and Atlas of Medical Ophthalmoscopy*, by Dr. Gowers (second edition, J. & A. Churchill), is a valuable work; Liebreich's *Atlas of Ophthalmoscopy*, edited by Mr. Swanzy (third edition), is also very useful.

In Aural Surgery, Sir W. B. Dalby's book on *Diseases and Injuries of the Ear* (third edition, J. & A. Churchill) is very good; there are also a book by Mr. G. P. Field on *Diseases of the Ear* (third edition, Renshaw); a *Manual of Diseases of the Ear*, by Dr. T. Barr (Maclehose, Glasgow; and Macmillan, London); a *Guide to the Study of Ear-Disease*, by Dr. P. McBride (W. & A. K. Johnston), and a *Handbook of Diseases of the Ear*, by Dr. M. Pritchard (Lewis); while Dr. Burnett's work on *The Ear: its Anatomy, Physiology, and Diseases* (second edition, J. & A. Churchill), and Dr. St. John Roosa's *Practical Treatise on Diseases of the Ear* (sixth edition, H. K. Lewis) are valuable and elaborate works. Dr. Macnaughton Jones has brought out a good *Practical Treatise on Aural Surgery* (second edition, J. & A. Churchill), and also a well-executed *Atlas of the Diseases of the Membrana Tympani and Auricle* (J. & A. Churchill). Dr. E. Woakes is the author of a useful practical work on Postnasal Catarrh and Diseases of the Nose causing Deafness.

Among works on Diseases of the Nose and Throat we have Mr. Cresswell Baber's *Guide to the Examination of the Nose* (Lewis); Mr. A. E. Garrod's *Introduction to the Use of the Laryngoscope*; also several useful works on Diseases of the Throat by Dr. Morell Mackenzie.

For the use of students in Dermatology, Mr. Malcolm Morris's *Manual of Skin-Diseases* (Smith, Elder, & Co.); Dr. Radcliffe Crocker's *Diseases of the Skin* (H. K. Lewis); and Dr. L. D. Bulkley's *Manual of Diseases of the Skin* (J. & A. Churchill), are very reliable guides. Sir Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. & A. Churchill) are well-known and valuable works. Dr. R. Liveing's *Handbook on the Diseases of the Skin* (third edition, Longmans & Co.) is well deserving of recommendation; so also are Dr. McCall Anderson's *Treatment of Diseases of the Skin* (Macmillan & Co.); and Fox's Epitome of Skin Diseases (third edition, Renshaw). For reference, there are Fox's *Photographic (Coloured) Illustrations of Skin-Diseases and of Cutaneous Syphilis* (J. & A. Churchill); and an *Atlas of Skin-Diseases* by Dr. Duhring, of Philadelphia (Lippincott & Co.).

For students of Dental Surgery the following books are published by Messrs. J. & A. Churchill: Sir J. Tomes's *Manual of Dental Surgery* (third edition); Sir J. Tomes's *Manual of Dental Anatomy* (second edition); Taft's *Practical Treatise on Operative Dentistry* (third edition); Sewill's *Student's Guide to Dental Anatomy and Surgery* (second edition); Stocken's *Elements of Dental Materia Medica and Therapeutics* (third edition); and Coles's *Manual of Dental Mechanics* (second edition). There are also a *Manual of Dental Surgery and Pathology*, by Mr. A. Coleman (Smith, Elder, & Co.), and Barrett's *Dental Surgery for General Practitioners and Students of Medicine* (H. K. Lewis). Among larger works are Gorgas's *Dental Medicine* (J. & A. Churchill), and Harris's *Principles and Practice of Dentistry* (eleventh edition, edited by Dr. Gorgas, J. & A. Churchill).

FORENSIC MEDICINE AND HYGIENE.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (eleventh edition, J. & A. Churchill); Husband's *Forensic Medicine and Medical Police* (Livingstone); Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw); and Dr. J. Abercrombie's *Student's Guide to Medical Jurisprudence* (J. & A. Churchill), are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (third edition, by Dr. Stevenson, J. & A. Churchill); the *Handbook of Forensic Medicine and Toxicology*, by the late Dr. Bathurst Woodman and Dr. Tidy (J. & A. Churchill); Dr. Ogston's *Lectures on Medical Jurisprudence* (J. & A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book describes the manner in which medico-legal investigations are carried out on the Continent. Dr. C. M. Tidy's work on *Legal Medicine* (Smith, Elder, & Co.) is a valuable book.

Under the head of Hygiene the principal books are Dr. Parkes's *Manual of Practical Hygiene*, edited by Prof. de Chaumont (sixth edition, J. & A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science* (fifth edition, J. & A. Churchill); Dr. A. H. Buck's *Treatise on Hygiene and Public Health* (Sampson Low & Co.); Prof. de Chaumont's *Lectures on State Medicine* (Smith, Elder, & Co.); Hart's *Manual of Public Health* (Smith, Elder, &

Co.); and Hart's *Truth about Vaccination* (Smith, Elder, & Co.).

REVIEWS.

ARTICLE 2078.

Outlines of the Clinical Chemistry of Urine. By C. A. MACMUNN, M.A., M.D.Dub. (Churchill: New Burlington Street, W.)

PART I. of this work deals with the constituents of normal urine and the variations in their amount, &c., during disease. Part II. treats of the abnormal constituents of urine. The work is designed to offer 'a brief but accurate account of the chemistry of urine in health and disease.' The characteristic feature of the treatise is the boldness with which the most recent work is introduced into the text, even when it is opposed to time-honoured dicta of high authorities. In short, the author is altogether free from the charge of being *laudator temporis acti*, to the exclusion of modern researches.

An explanation of this may perhaps be found in the fact that the author has been personally actively engaged in chemical and physiological researches, many of the results of which are incorporated in the little volume before us.

It may perhaps be interesting to offer a few instances of the introduction of recent work, and in some cases to criticise the author's criticisms thereupon.

In speaking of the 'fermentation' of urine (alkaline) on p. 20, the fact that a torula starts the alkaline fermentation of urine is acknowledged, but the results of Sheridan Lea are also admitted, which prove that a non-organised soluble ferment may be isolated from fermenting urine, which is secreted by the torula, and is itself able to bring about alkaline fermentation.

On p. 51, the author rejects the method of Russell and West for determining the urea in urine in a very summary manner, simply stating that, 'though at one time much used, it cannot now be recommended.' It would be more satisfactory, to Englishmen at all events, to hear upon what grounds the method is condemned.

On p. 72, creatinin is mentioned under the head of 'uric acid and allied bodies,' though it does not seem to be allied very closely with uric acid, either chemically or physiologically. The statement is made that 'by heating creatin, water is given off and creatinin is formed,' though no one has obtained creatinin from creatin, so far as we are aware, by simple heat; the co operation of acids has always been found necessary.

Chapter VII., 'On the Colouring Matters of Urine,' is replete with valuable information recently acquired on this difficult point. Many of the researches quoted are from the author's own pen.

On p. 124, *et seq.*, will be found a very lucid account of the condition known as 'phosphaturia,' the distinction between true and false phosphaturia being clearly drawn.

Under the head of Albumen in the Urine, it is clearly indicated that the distinguishing tests between albumen and mucin are in a very unsatisfactory state. Thus on p. 144, Saundby's method of testing for albumen with heat is described, and the statement is made that Kirk and others find that urines containing mucin, but no albumen, give a reaction with it, whilst Saundby finds that only albuminous urines react to his test.

Again, on p. 146, the author states that mucin is precipitated by picric acid, a statement which is directly negatived by Dr. G. Johnson.

The author is decidedly in error when he states upon p. 146 that picric acid causes a cloud with 'phosphates when they are present.' Of course, phosphates are present in all urines; but picric acid, by virtue of its acidity, actually redissolves precipitated phosphates, and could certainly never precipitate them.

On p. 147, it is said that potassio-mercuric-iodide (Tanret's reagent) acts like picric acid. Those who have carefully compared the two reagents will acknowledge that there are important differences between them.

On p. 154, the researches of Dr. Sidney Martin on different proteids in the urine are detailed, and the whole question is put as clearly as we have ever seen it. It is a highly complex subject, and perhaps it is almost too much to hope that it has at last been finally settled, but at all events the summary in Dr. MacMunn's book is clear and brief.

On p. 176, Dr. MacMunn quotes Wedenski to the effect that there is 0·5 gramme of grape sugar passed in human urine each twenty-four hours. This is an opinion which is certainly open to question.

There are numerous woodcuts of urinary deposits, &c., and a map of spectra of some colouring matters from blood, bile, and urine.

The book is elegantly bound and beautifully printed. Although many of the analytical methods described are far too complex, and would occupy too much time to be generally employed by busy practitioners, still a careful perusal of Dr. MacMunn's book will certainly assist the latter 'to judge intelligently of the results obtained by others,' as the author puts it in his preface.

We wish Dr. MacMunn success in his literary venture, and look forward with interest to the new edition whose advent is hinted at in the preface to the present one. G. STILLINGFLEET JOHNSON.

ARTICLE 2079.

Report of Investigations in Fourteen Schools in London to be presented to the Committee appointed by the Psychological Section of the British Medical Association. Prepared by FRANCIS WARNER, M.D.Lond., F.R.C.P., Honorary Secretary to the Committee.

THIS is a provisional report of the Committee appointed at Glasgow by the British Medical Association to conduct an investigation as to the average development and condition of brain function among the children in primary schools. Fifty pounds were allowed by the Council of the British Medical Association to defray the necessary expenses of this inquiry. A scheme was drawn up mentioning the principal symptoms and abnormalities to be looked for in children of deficient mental capacity. We think that this scheme might be published along with the other documents as being well framed and suggestive, and leading other observers to fall into the same lines of inquiry. In a scientific point of view it is of importance to ascertain the comparative value of the *stigmata* which accompany mental deficiency amongst children. For example, a high, vaulted, or saddle-shaped palate frequently accompanies generous idiocy, but not always. On the other hand, I have seen this condition of palate in children of normal intelligence, and even in clever children, though in such normal children it is much less common. Dr. Warner has called attention to the position of the hand with the thumb drooped or extended as an indication of mental or nervous weakness. None of these signs are absolutely pathognomonic, though often accompanying some varieties of mental disease or deficiency. The report was originally published in the *British Medical Journal* of July 27. It gives but a portion of the work done in different quarters by members of the committee. The London School Board refused to allow their schools to be visited for the purposes of their investigation, but the committee were allowed access to fourteen London schools, ten public elementary schools, and four special schools—one for paupers, two industrial schools, and one for the deaf and dumb, at Old Kent Road, containing fifty-one pupils. In this school the palate was found vaulted in two cases, in two it was narrow, and in three arched; and in five out of these seven cases the deafness was hereditary. I have several times noted that a high palate is common with those born deaf, and the same observation has been made by Dr. Berkhan of Brunswick.

Altogether 5,344 children were seen at the fourteen London schools. The main symptoms observed, such as nervousness, low nutrition, mental dulness, and cranial abnormalities, are carefully tabulated. What renders such an inquiry of public interest is the importance of ascertaining the number of those backward, nervous, or very dull children, who lose pace with the rest, cannot be pushed through the standards, and are a source of embarrassment and difficulty to the teachers who are expected to march all up in line, and to let none fall behind. Mental dulness was observed or reported to the committee in 231 cases. Those interested in the subject will find further details in the report. Another edition of it will soon be given to the world, along with other documents bearing on the matter.

If the School Boards are to go on compelling all children to go to school they will be constrained in the end to make allowance for deficient capacity, and not to continue to assume that all children can be pushed, driven, or thrashed into equal attainments. For classification, an inquiry like this, which is still going on, will be found of much service.

The reading of the provisional report by Dr. Warner, was followed by two other statements by the members of the committee. One of them gave some information about the schools for backward children in Norway. It appears from a letter written by Jacob Soethre, the superintendent of the Institution for Imbecile Children at Ekelund, near Bergen, that there are special schools for backward children at Christiania, Drontheim, and Tromsö, as well as in Bergen. Those in the last mentioned town are under Soethre's charge. There are about forty pupils. The success of the experiment is somewhat hindered by the dislike of the parents to send their children to a school for registered dulness. In this school there is a larger proportion of teachers and special appliances. Besides this there is near Bergen, a reformatory or truant school, with 120 pupils, and a school for incorrigibly mischievous, or criminal boys with 36 pupils. Mr. Wilkinson, the chairman of the Leeds School Board, took part in the discussion. He did not like the proposal of having separate schools for backward children, thinking it would not be favoured by the parents, and might have a tendency to affix a label on the children which might impede their progress in life. This sentiment was evidently shared by many in the meeting. A new committee was appointed to continue the inquiry. They were authorised to publish reports, and to apply to Government for money to help them in defraying expenses. W. W. Ireland, M.D.

Article 2080.

Transactions of the American Orthopædic Association. Vol. I., published by the Association. 1889.

This volume describes the constitution and by-laws of the association, gives a list of members, and an account of their preliminary meeting. This latter took place on Jan. 29, 1889, at the house of Dr. Shaffer. Dr. Gibney, who had taken a considerable part in organising the association, was elected the first chairman, and Dr. Lovett secretary.

This association seems to be constituted upon a sound basis, and since its commencement has done much to advance orthopædic surgery in America. The number before us contains many excellent papers by American surgeons, notably by Drs. Taylor, Stillman, Judson, and V. P. Gibney, of New York; Drs. Benjamin Lee and Willard, of Philadelphia.

It is impossible in the scope of this review to give a full description of the individual papers; suffice it to say that the majority of them seem to be well written and carefully compiled.

Dr. T. G. Morton describes an apparatus which he has devised for stretching the foot in cases of varus. It consists of a block of wood, on which is fastened an inverted and well-padded horseshoe, into which the heel of the foot is held by an assistant, or is secured by a strap passing over the instep; a pad draws strongly upon the projecting tarsus by means of a powerful screw; another band and screw are connected with the anterior part of the foot, and make traction in the opposite direction. Any amount of force is thus brought to bear upon the deformity; flexion and rotation can readily be made.

Further modifications of apparatus are also shown by Dr. Morton. In complimenting the author upon the ingenuity of his device we cannot forbear to remark that in such cases the chief difficulty is in the intolerance which the human flesh presents to direct pressure. In young children we think there is nothing to compare with plaster-of-Paris bandages in the production of such pressure. In adults a different course has, however, sometimes to be pursued.

Dr. Taylor describes a case of caries of the spine in which considerable lateral deformity was present. The reports of these cases are always of value, as the possibility of such a variation from the typical position in caries of the spine is often lost sight of in practice. We have seen not a few cases in which mistakes have been made in diagnosis, and, in the present day, when massage and the 'movement cure' are so popular, it is well to draw attention to the fact that such mistakes are of vital importance to the patients to be dealt with.

Dr. Ridlon described a case of caries of the spine which illustrated a point of difficulty of diagnosis in upper dorsal and lower cervical caries in very young children.

Dr. Stillman describes and figures an exercising apparatus for the treatment of round shoulders. It would seem to be an effective machine, but here again we think caution is desirable as it is impossible to be always sure at first as to the exact nature of a case of round shoulders. We have known several instances in which although the appearances were all in favour of a functional deformity, in the sequel it was proved that the cases were undoubtedly of an inflammatory character.

There are many other articles well worth the attention of those interested in orthopædic surgery, and we shall look forward with pleasure to forthcoming volumes of the Transactions of this promising society. NOBLE SMITH.

ARTICLE 2081.

An Essay on Asphyxia (*Apnœa*). By GEORGE JOHNSON, M.D.Lond., F.R.C.P., F.R.S., Emeritus Professor of Clinical Medicine, Consulting Physician to King's College Hospital, Physician Extraordinary to Her Majesty the Queen. Pp. 53, 8vo. London: J. & A. Churchill. 1889.

DR. GEORGE JOHNSON'S essay on asphyxia will be read with interest, not only by physiologists but also by physicians. It must be looked upon as a very lucid exposition of the physiology of a most important condition. The view which the author takes as to the causation of the abnormalities in the vascular mechanism in asphyxia is urged with such evident conviction of its truth as should go far to convince the most sceptical, even if supported by less cogent arguments than those which he has brought forward. The essay, indeed, deserves close attention.

After a preliminary account of the agents concerned in maintaining the circulation, the author proceeds to direct attention to the condition of the vascular system observed after death from asphyxia. He points out that modern text-books on physiology differ in one important point with regard to the condition of the heart in asphyxia from those of earlier date, and in differing, he maintains, almost certainly err. The point of difference is as to the state of the left heart after death from suffocation—whether it is full or empty. Dr. Johnson holds with Todd and Bowman, Swayne Taylor, and Guy and Ferrier that the left heart is either empty or that it contains much less blood than the right. Burdon Sanderson, on the other hand, distinctly states that the left heart contains more blood than the right in the proportion of 3:2. Stevenson also says that the left side of the heart as well as the right is usually filled with blood. Foster, Yeo, Landois and Stirling agree with this view. When the left heart is occasionally found empty these physiologists explain the phenomenon as an effect of *rigor mortis*. Although authorities disagree about the condition of the left heart, there is, however, a general agreement as to distension of the right heart and of the systemic veins with blood; Sanderson stating, for example, that 'the veins are distended; that if cut they spirt like arteries;' and Foster agreeing almost in the same words, 'the veins spirt out when pricked.'

Our author attacks the modern view that all the chambers are equally filled with blood, and brings forward many experiments to show that the left heart is empty and not full. He says: 'The recently propounded doctrine that the left cavities are full immediately after death, but are emptied by the *rigor mortis* of the ventricle, is inconsistent with the fact that the sooner the chest is opened after death the greater is the distension of the right cavities and the emptiness of the left.' He next proceeds to consider in the essay the cause of the great distension of the cavities of the right heart and of the systemic veins. As to this, there are the two theories, held respectively by those who state that the left heart is empty after death, and by those who assert that it is full. The first supposes that the distension of the right heart, and the emptiness of the left, is due to an obstruction to the pulmonary circulation; the second asserts that it is because the contractile power of the heart muscle is impaired and ultimately destroyed. Dr. Johnson holds the former view most strongly, and brings forward evidence in support of it which seems to us sufficient to prove his point. In case some of the readers of this account are unable to read the essay itself, it may be as well to epitomise some of Dr. G. Johnson's conclusions as to the sequence of events in the vascular system during asphyxia (apnœa). In the early stage, improperly oxygenated blood freely enters the left side of the heart and the systemic arteries and capillaries, but soon, either directly by its influence on the vascular muscle itself, or, as is most probable, reflexly through the vaso-motor centres, the blood causes contraction of the arterioles, with increased arterial tension, and then distension of the left heart; the systemic circulation is thus impeded, but is not arrested, and blood becoming more and more deoxidized, passes into the veins and reaches the right heart and pulmonary vessels, but on attempting to pass the pulmonary arterioles, it meets with the obstruction of the contracted arterioles. The cause of the obstruction is similar to that which had previously occurred to the systemic arterioles, viz., that the deoxidized blood, either directly or reflexly, has caused the contraction of the muscle of the small arteries. The effect of this obstruction, which becomes greater and greater, is twofold; it tends, on the one hand, to empty the left side of the heart, and so to diminish arterial tension, and on the other hand, it causes great distension and dilatation of the right cavities. 'It would appear that while the systemic arterioles immediately resist the passage of imperfectly aërated blood, the resistance offered by the pulmonary arterioles does not commence until the deoxidation of the blood has passed beyond a certain stage, and then resistance again is rapidly overcome by the re-admission of atmospheric air to the lungs.'

Blood-pressure in the systemic arteries begins to fall whilst the cavities are still distended and the arterioles contracted; why, it is difficult to understand. We should think that the *over-distension* of the left chambers of the heart was its most probable cause. Of course, the subsequent fall of blood-pressure is due to the diminishing supply of blood passing through the lungs to the left side of the heart, in consequence of the increasing resistance to the pulmonary circulation. It would seem to be almost essential, in order to complete the theory of Dr. Johnson, firstly, that there should be a special vaso-motor centre for the control of the pulmonary blood-vessels, unless a part of the vaso-motor centre is less sensitive to stimulation by venous blood than the remainder, which is unlikely, and, secondly, that there should be special vaso-constrictor nerves to the pulmonary blood-vessels (arterioles). The latter, at all events, is highly probable, and is, apparently, on the point of being demonstrated.

We cannot, in the space at our command, follow the author into what is, perhaps, the most important part of his essay—namely, the comparison of the phenomena of Asphyxia with those of Choleraic Collapse, Asthma, Chronic Bright's Disease, and Raynaud's Disease; it must suffice to say that the short chapter on the subject will well repay perusal. We commend also the rational account of the cause and phenomena of nitrous oxide anæsthesia given on pp. 30–33. Upon one point we venture to differ from the author most emphatically—namely, upon his reintroduction of the word *apnœa* for asphyxia; however inaptly these two words have been applied, they have, at all events, been received by the rising generation to mean, the one (apnœa)—the temporary suspension of respiration arising from temporary over-oxygenation of the blood, and the other (asphyxia)—the partial or complete arrest of respiration, whereby the access of air to the lungs is cut off. It appears to us to serve no good purpose to alter the hitherto received signification of these terms.

In conclusion, we beg to thank Dr. George Johnson for his most able and convincing essay, from which, we feel certain, much that is of importance to us all can be learned.

Vincent D. Harris, M.D.

NEW MEDICINES AND NEW INSTRUMENTS

AT THE ANNUAL MUSEUM AT THE LEEDS MEETING OF THE BRITISH MEDICAL ASSOCIATION.

The interest in the exhibits on this occasion was fully equal to that shown on former occasions, and, except that space was limited, the premises were very well suited for the purposes of this annual bazaar of new and rare pharmaceutical products, surgical instruments, and sanitary contrivances. Most of the exhibitors were old friends, with whose products our readers, for the most part, must be more or less familiar. We only propose, therefore, to call attention to products of recent introduction or unusual interest or perfection. Members of the Association visit the Museum for the purpose of seeing what is new, of becoming familiar with the latest additions to pharmacological resources, and of noting pharmaceutical improvements tending to enhance the effect or facilitate the administration of remedies, old and new.

The gathering affords inventors the longed-for opportunity of bringing their ideas, reduced into practice, to the notice of medical men, and it enables publishers to display the beauties of the engravings with which they have graced their publications.

The fact that this year, for the first time, a charge was made for space does not seem to have affected the show unfavourably, though it may have had the effect to frighten away a few 'hangers on,' to whom the smallest addition to the expenses of exhibiting would prove deterrent.

The catalogue comprises over a hundred pages of exhibited articles, exclusive of advertisements. It is put together in a way which admits of easy reference, and the only addition we might suggest would be a plan of the rooms, so that particular exhibits might be singled out and visited.

In Messrs. **Allen & Hanburys** we have one of the oldest and most respected firms of London. Their exhibit, though comprising no very startling novelties, was well worthy of a visit. They showed various special preparations of their own, such as the Tasteless Castor-oil, a boon to fastidious and constipated patients, and the several products with Bynin (liquid malt) as a base. Bynin itself is an active preparation of malt, rich in diastase and perfectly liquid. Its digestive qualities are enhanced by combination with pepsin (Byno-pepsin), and to its nutritive properties are superadded the specific tonic and therapeutical effects of the phosphates and hypophosphites (Byno-phosphates and byno-hypophosphites). In Bynol we have a palatable and readily assimilable form of cod-liver oil *plus* extract of malt, the advantages of this blend being now generally recognised. The only other malted preparation calling for notice is their Malted Infants' Food, a highly nutritious mixture of soluble carbo-hydrates. We believe this firm was the first to introduce the glass capsules of nitrite of amyl and iodide of ethyl, the only reliable way of preserving these highly volatile substances ready for active use. They also exhibited a large collection of compressed drugs (tabellæ), new drugs and chemicals, &c.

Sozoiodol is a compound of carbolic acid and iodine, which is suggested as a substitute for iodoform as an antiseptic. It is odourless, fairly soluble, and is said to be perfectly inoffensive. It forms a definite series of salts. This product and its derivatives were exhibited by Mr. F. Boehm, of Billiter Square, E.C.

To describe the exhibit of Messrs. **Burroughs, Wellcome, & Co.** is always a tax upon the literary ability of the press representative, but we must do them the justice of saying that they and their *employés* endeavour to lighten the task to the utmost of their power. It is hardly necessary to pass in review many of the products upon which the reputation of this enterprising firm has been established. The Peptonising Powders and various digestive ferments (Fairchild), the Extract of Malt (Kepler), which possesses the remarkable property of taking cod-liver oil into solution; and the ever-increasing number of drugs in tabloid form, are all of them too well known by this time to render it necessary for us to sing their praises, although the pharmaceutical excellence of these preparations is such that eloquence ceases to be an effort. The compactness and convenience of the pocket hypodermic cases, with their miniature arsenal of compressed alkaloids for hypodermic use, cannot be surpassed, and their ready sale at the stand is evidence of a widespread appreciation of their value. Two kinds of inhalers were at work: the Vereker Chloride of Ammonium Inhaler, a form which furnishes an unlimited supply of perfectly neutral vapours of chloride of ammonium; and the Pinol-Eucalyptia Dry Inhaler, for bringing the antiseptic properties of these essential oils to bear upon the pulmonary mucous membrane. Let us note also the preparations of Ichthyol, a fossil oil, rather unsavoury, but very efficacious in the treatment of myalgia, gout, and cutaneous affections, and of Lanoline and its derivatives. Their medicine chests, in reference to which Stanley has written in terms of high commendation, would be difficult to surpass for travellers' use.

We must not omit to mention the 'Thermo-Safeguard Feeding Bottle,' brought forward by this firm. It is a curved bottle with tube, but the stopper is of glass, allowing of perfect cleanliness. The salient feature of this apparatus is a thermometer which is embedded in the glass with an indelible mark to indicate when the contents are at the proper temperature. This is a very practical and useful contrivance, and as the price is only 1*s.* 6*d.* it should come into general use.

Messrs. CARSWELL & CO. have introduced the novel but convenient system of dispensing champagne in syphons. Professional *gourmets* may scoff at the idea, but it offers manifest advantages when it has to be given in small quantities at a time, as in the case of invalids.

Messrs. CHRISTY & CO.'S exhibit was one to which it was not easy to do justice. It comprises drugs which may be described as the 'buds' of therapeutics. All that is new in materia medica finds a place on their stand, and it is difficult to know which to select for special mention. Euonymin, kara kara, Jambul seeds, Kola chocolate, Papaine, Chaulmugra and other oils, Papaw milk, and a host of other remedies, brought from the remotest corners of the earth, where they have for centuries been utilised in the treatment of various affections. Simulo, the new remedy for epilepsy, is a promising drug, of which we shall probably hear more. Their Christia, a new surgical tissue in sheets and bandages, is an economical and useful substitute for oiled silk and rubber tissue, and will certainly be largely used as it becomes more generally known. Last, but not least, they have a very stable solution of dialysed albuminate of iron.

The fatigue incidental to an attentive study of the novelties alluded to above, predisposed one to bring away a favourable impression of the tonic and restorative properties of the 'Champagne Coca' exhibited by Messrs. CORBYN, STACEY, & CO. It is an excellent stimulant and well adapted for those who suffer from nervous exhaustion. We may single out among their products for particular notice the Liq. Cinchon. Rub. and Liq. Santal Co., the Elixir Cascaræ Sagradæ, and their malt preparations in combination with cod-liver oil, iron, &c. Their nasal cones, containing cocaine, will be found useful in obtaining the anæsthetic and de-congestive effects of that drug on the nasal mucous membrane. We cannot do more than allude to the various new chemicals and drugs comprised in their very extensive exhibit.

Those who are averse to more violent remedies for constipation will do well to test the laxative properties of Dahl's Dyspepsia Cakes, made from the cortical layers of the various cereals. Lorentzen's Condensed Cream and Malt Extract is an extremely palatable and easily digested form of fatty food. Dahl's Agency also exhibited Thanetene, a new disinfectant of promise.

The antiseptic and preservative virtues of essential oils were recognised and utilised centuries before chemists succeeded in producing from tar the wonderful series of chemical disinfectants the danger of which is, unfortunately, often proportionate to their efficacy. The essences are, at any rate, more agreeable to use, and are, for the most part, innocent of evil attributes. These remarks were suggested by the Pumiline Essence exhibited by MESSRS. G. & G. STERN. This is the fragrant volatile essence of a special variety of pine. Not only does it possess the deodorising and disinfectant properties of the essences in a high degree, but, as hundreds of testimonials record, it is productive of the happiest results in the treatment of various pulmonary affections when taken internally or inhaled. The Pumiline Extract is intended to facilitate the carrying out of the well-known 'pine treatment' at home. Dissolved in a bath of hot water, it exercises a wonderfully stimulating effect on the skin, which is decidedly beneficial, not only in various cutaneous affections, but in gout, rheumatism, and disorders generally in which the functional activity of the skin is a factor of some importance. It is also employed in the form of a liniment and an ointment. Of the Pumiline Soap we shall have more to say later.

Among the miscellaneous objects of interest we may mention the Spécialité Lime Juice (Feltoe & Sons); Godfrey's Chloride of Ammonium Inhaler; Griffin's Nutrient Suppositories; the 'Hamburgh' (Hoff's) Liquid Malt Extract, and the 'Santha' Tea, a dry extract of tea, in which the tannin has been neutralised without injury to the flavour or strength.

Space prevents us doing justice to the stable hypodermic solutions and hypodermic cases of Messrs. CHARLES GREEN & CO. They are perfectly clear, and are guaranteed not to go wrong. They have a Liquor Copaibæ which constitutes a vast improvement on the usual nauseous emulsion.

Of Messrs. HOWLETT'S products we may mention the liq. santal. flav. cum buchu et cubebâ, an admirable combination for use in gonorrhœa, &c., and the 'permanent' liq. ferri iodidi.

Messrs. HOCKIN, WILSON, & CO. exhibited the following well-known and valuable combinations:—Liq. podophyllin; liq. pod. et pepsin; and liq. pod. et bellad. cum strych.; also several liquid extracts—salix nigra, the sedative and anaphrodisiac; collinsonia canadensis, and cascara sagrada insipidum; together with various drugs and surgical instruments and appliances.

The MALTINE MANUFACTURING COMPANY, LIMITED, showed Maltine, an active and reliable extract of malted cereals; Maltine with cod-liver oil, an ideal preparation of this useful but disagreeable substance, &c. The combination of Maltine with phosphorus is a convenient and agreeable form for the exhibition of this drug. The list of combinations of maltine with other medicinal and digestive agents is a long one. They all have the merit of being easily digested, and of possessing a distinctly agreeable taste.

The exhibit of the Antiseptic Dressings Factory (Mr. John Milne) is a standing testimony to the hold which Listerian ideas have taken on modern surgeons. The selection represents all the more important antiseptic dressings now in use, originally prepared by Mr. Milne. One set of dressings is thoroughly impregnated with a stated amount of sal alembroth, and stained blue to distinguish them from others. The strength varies from 1 to 2 per cent. The absorbent alembroth cotton-wool and the tow contain 2 per cent., while the lint, bandages, pads, and wound dressings contain 1½ per cent. The alembroth gauze contains 1 per cent. These dressings are largely used in Government and public hospitals, being cheaper and more convenient in every way. The non-mercurial dressings comprise tow, cotton wool, lint, &c., containing from 5 to 10 per cent. of carbolic acid, with carbolic mackintosh and protectives. In deference to modern requirements we have gauze, cotton wool, bandages, &c., impregnated with thymol or the alternative eucalyptol; boracic lint containing 40 per cent. and cotton wool containing 30 per cent. of boracic acid. These are stained with litmus to facilitate distinction. Among the more important additions to this very comprehensive collection we may mention more particularly the 'Dressing Bandages,' made of double-sided, lined, or padded antiseptic bandage, layers of this bandage being a substitute for cotton wool, lint; gauze and ordinary bandage; the ligatures of different sizes neatly put up in flasks, thereby avoiding entanglement and waste, and the sutures of antiseptic silk wound on reels securely protected against septic influences in stoppered receptacles. Both these contrivances do credit to the ingenuity and enterprise of the firm, and are thoroughly appreciated by practical surgeons.

Milne's hospital case of ligatures, sutures, and drains is an indispensable fixture for every operating room, these articles being conveniently arranged, easily got at, and perfectly aseptic. There is also a very admirable series of Surgeon-Major Bourke's First Field Dressings, in sealed packet, which should be found serviceable elsewhere than on the battlefield. Some of these packets ought, indeed, to be held in reserve at every railway station, police station, and large factory throughout the kingdom. Still better, perhaps, would be Milne's ambulance stock box, containing everything in the nature of a dressing required to meet surgical emergencies, under conditions which render them reliable for years. The price is exceedingly moderate, and this, indeed, is the case throughout.

Messrs. **Oppenheimer, Bros., & Co.** exhibited several of the liquors which have of late been brought to the favourable notice of the profession. For want of space we must limit ourselves to a brief notice of their liq. euonymin et pepsin co., and the same drug in combination with bismuth and with cascara sagrada. The combination of euonymin with pepsin is singularly appropriate, and should prove no less efficacious. Their fluid pepsin, as we have already had occasion to remark, is an active preparation, the value of which it is easy to ascertain experimentally. They also showed their Carnavena Wine, a medicated wine containing the principles of oats, meat, and coca.

From the ornate and extensive exhibit of Messrs. **John Richardson & Co.**, of Leicester, we may select the series of U.S. Pharmacopœia fluid extracts, which are attracting favourable notice; their ambulance case; and their soluble pearl-coated pills and granules.

Mr. **Sacker**, of 79 Fenchurch Street, had on show a very large selection of hypodermic solutions and pocket cases. We can testify from personal experience to the stability and general reliability of the former. To meet the taste for compressed drugs, Mr. Sacker has prepared a series of tablets and pellets which readily dissolve in the mouth or when swallowed. He also exhibited his well-known medicated suppositories, bougies, pessaries, &c., and a complete collection of the fluid extracts of the U.S. Pharmacopœia. The characteristic of these fluid extracts is that they are a concentration of the active ingredients of the drug, each drop representing one grain of the pure drug. There were also a number of compact pocket vial cases, hand medicine-chests, obstetrical satchels, &c.

It is impossible to speak too highly of the wood-wool preparations of the **Sanitary Wood Wool Company** (Hatton Garden). This product possesses unrivalled absorbent properties, and when impregnated with sublimate forms a dressing material which is quite unsurpassed. It is made up into diapers, sheets, and napkins, all of which possess the absorbent and disinfectant properties of the wood-wool itself. Hartmann's sublimate gauze is as good as any we have seen, and his 'Lotiforms' afford the means of preparing sublimate solutions of a given strength at a moment's notice.

Let us allude, *à titre de mémoire*, to the antiseptic 'Sanitas' preparations, now universally known and used. Kingzett's Bactericides combine the powerful bactericidal effects of such agents as corrosive sublimate, &c., with hydroxyl, itself a powerful oxidising agent.

Messrs. **Schieffeln**, of New York (Mr. Sacker, agent), showed a large and varied assortment of soluble pills and granules of every conceivable formula, and of remarkable finish.

Messrs. **Seabury & Johnson**, 46 Jewin Street, E.C., had a very full exhibit in a commanding situation. They showed a very handy little accident case, containing a complete outfit for ordinary surgical cases on the principle of 'first aid to the injured.' Their adhesive plasters in rubber combination are both pliable and waterproof, and are easily applied, the heat of the body being sufficient to secure adhesion. They also showed a set of dermatological plasters containing a guaranteed percentage of the medicament, well adapted for use in this department of practice. For aërial disinfection they have devised some compound sulphur candles which can be used without the trouble incidental to the ordinary process. They have the usual supply of absorbent cottons, gauzes, and lint, of excellent quality, together with a supply of ligatures, sutures, drains, &c. The new non-poisonous, non-corrosive, and odourless antiseptic 'Hydronaphthol' is reported to possess the germicidal powers of the sublimate, without its drawbacks. It is put up in titrated tablets and in the form of toilet soaps, which are perfumed and perfectly neutral.

The **Universal Digestive Tea Co.** exhibited a blend of tea, dried and prepared on a patented principle, whereby the tannin is rendered inactive, while the flavour and strength are claimed to be retained unimpaired.

Messrs. **Warner & Co.** (Francis Newberry & Sons) exhibited their well-known 'Bromo-soda' with caffeine, a cerebral sedative; their 'Bromo-potash,' an effervescent hydrobromate of caffeine and bromate of potassium; and various other useful pharmaceutical products.

There were a number of local and provincial exhibits of interest, which space alone prevents our noticing. We shall hope to do so on a subsequent occasion.

We may group the 'dietetic' exhibitors together, their products having many qualities in common. Messrs. **Brand & Co.** were to the front with their dietetic specialities for invalids. These appeared to have been prepared with great care and a due regard for the chemical laws underlying the manipulation of unstable albuminous products. Their meat essences and concentrated preparations are fully worthy of confidence. Messrs. **Carnrick & Co.**, exhibiting in conjunction with the Maltine Company, had a number of valuable food products, notably their beef peptonoids—a combination of concentrated beef and milk with gluten, partially converted into peptones; their liquid peptonoids (beef peptonoids in sherry); also a *soluble food*, consisting of desiccated milk with dextrine and milk sugar, peculiarly adapted for infants' use; and, lastly, some well-finished pellets of compressed drugs.

Under the name of 'Frame Food' the Frame Food Company have brought forward an extract from the woody fibre of wheat-bran, containing the phosphates and other products which are lost in the ordinary process of manufacturing bread. It is proposed to mix this with flour in making bread and farinaceous foods generally, whereby its nutritive powers are claimed to be materially increased. We propose to examine these claims, and, if substantiated, to report on them.

The Liebig's Wine Co. showed Pearson's Beef Wine (Vin Regno), a highly nourishing and agreeable addition to the invalid dietary. A quart of 'Vin Regno' contains the juice of five pounds of beef.

Messrs. Loeflund & Co. (148½ Fenchurch Street, E.C.) have recently introduced several dietetic specialities of great merit, notably the Kindermilch, a half-peptonised milk in combination with soluble wheat extract; some 'Alpine Milk Biscuit-powder' for children up to two years of age; and various other choice foods and malt preparations.

Messrs. Mason & Co. exhibited some very excellent meat essences and concentrated beef-teas. Their O K Bouillon is a delicately flavoured beef-tea, and the meat lozenges may prove of service to travellers and invalids.

Mellin's Food has a well-merited reputation as a soluble and very nutritious food, and its use is yearly extending. It is uniform in quality and keeps well with ordinary precautions. It is a brown powder containing grape sugar, and is rich in gluten and phosphates. The emulsion of cod-liver oil and hypo-phosphites is a perfect emulsion, with a taste which is rather agreeable than otherwise, and their coca-wine is a powerful stimulant, possessing the characteristic flavour of the leaf.

The Viking Food and Essence Company have a well-selected series of invalid foods ready for use. The series includes soups, essences, beef-tea, jellies, and lozenges, all secured in well-stoppered jars and tins, and possessed of a delicate flavour.

NEW PREPARATIONS.

CHLORALAMID.

Messrs. Zimmermann have submitted to us a sample of the new hypnotic, *chloralamid*, a product which for some time past has attracted a good deal of attention in Germany, but, curiously enough, does not seem to have been brought to the notice of the profession in this country. It is a colourless crystalline body, soluble in about nine parts of water, or in one and a-half of spirit. It remains unchanged in acid solutions, but the caustic alkalies and alkaline bases cause it to undergo decomposition; hence it should be prescribed in a faintly acid solution. Given in doses of from 20 to 50 grains, it is said to induce a calm tranquil sleep of several hours' duration, without exercising any depressing influence upon the circulation. It would seem to be specially adapted for cases of insomnia, due to neurasthenia, as well as the sleeplessness frequently associated with pulmonary and cardiac disease. In the majority of cases no unpleasant after-effects have been noted. Chloralamid would, therefore, appear to constitute a valuable addition to our *répertoire* of hypnotics.

NEW INVENTIONS.

DR. WARD COUSINS' OINTMENT INJECTOR.

The injector consists of a hollow wooden or vulcanite cylinder over two inches in length and about an inch in diameter; with a curved tube, bulbous and perforated at its extremity. The piston, instead of being constructed after the type common to most syringes, is a simple concave disc which slides up and down the cylinder. To fill the instrument, the tube is unscrewed from the cylinder. The ointment is then introduced into the cylinder, and the tube screwed on again. The injector is held in the right hand, the tube passed gently into the rectum and the disc or piston compressed with the finger. The ointment is projected through the orifices at the end of the tube. The movable disc is more simple and convenient for self-use than the commoner form where a rod is fitted to the piston and bears a ring or knob which is pressed by the finger or thumb. When the cylinder is empty, the disc can be shaken into place with the greatest facility. Dr. Cousins recommends that ointments introduced into his injector should be prepared with lanoline as a basis. The injector is manufactured by Messrs. Burroughs, Wellcome, & Co.

PATENTS.

[*This list is specially compiled for the* London Medical Recorder *by Messrs.* Rayner & Cassell, *Patent Agents, of* 37 *Chancery Lane, London, W.C., from whom all information relating to Patents may be had gratuitously.*]

12,701. Improvements in plaster for medical purposes and in composition therefor. Alfred Edward Jones, 73 Cheapside, London.

12,715. An improved device for introducing a heated product into the cavity of a tooth. Dexter Megguire Small, 142 Fleet Street, London.

12,785. Improvements in beds for invalids. Anais Hussonmorel, 47 Lincoln's Inn Fields.

12,848. Improvements in apparatus for rolling surgical bandages. William Hillman, 10 Brackley Terrace, Chiswick.

12,862. An improved instrument for facilitating dental and other operations. Carl F. W. Frantzen, 45 Southampton Buildings, London.

13,039. Dietetic non-constipating intrinsically flesh-forming flour for making bread. Dennis Turnbull, Cheltenham.

13,078. Improvements in the construction of artificial legs. James Stubbs, Bank Buildings, George Street, Sheffield.

13,256. Improvements in and relating to surgical instruments. Herbert Arthur Lawrence, 3 Poets' Corner, Westminster.

13,525. An improved apparatus for administering nitrous oxide. Alexander Thomas Clarkson, 28 Bartlett's Buildings, London.

13,695. Improvements in optical apparatus. Henry Pincus and Oakley Selleck, 52 Chancery Lane, London.

13,898. Improvements in adjustable easy or invalid chairs. John Keys Bartlett, 22 George Street, Westminster.

MISCELLANY.

The Russian Academy of Sciences offers a prize of 5,000 roubles (£500) for the best inquiry into the nature and effects of the poison which develops in cured fish. The objects of competitors must be : '(1) To determine, by means of exact experiments, the physical and chemical nature of the poison which develops in fish ; (2) to study, by experiments on animals, its action upon the heart, the circulation of the blood, the organs of digestion, and the nervous system ; (3) to determine the rapidity of its absorption by the digestive organs ; and (4) to study and describe the characteristics which may serve to distinguish contaminated fish from such as are not contaminated.' The fifth and sixth questions, with which it may be impossible for any one to deal satisfactorily, relate to the means of preserving fish from the development of the poison, and to the question of counter-poisons and the medical treatment of poisoned persons. The competition is open to all. The memoirs must be sent in, either in manuscript or printed, before Jan. 1, 1893, and may be written in any one of the following languages : Russian, Latin, French, English, German. If none of the papers is deemed worthy of the full prize, the accumulated interest upon the above-named sum may be handed over to the author who presents the best solution of some part of the problem.

COMPETITIVE EXAMINATION OF CANDIDATES FOR HER MAJESTY'S ARMY, INDIAN AND NAVAL MEDICAL SERVICES.

ANATOMY AND PHYSIOLOGY.

SIR JOSEPH FAYRER.

Monday, August 12, 1889—from 10 a.m. till 1 p.m.

1. Describe the fibula, the origin and insertion of muscles connected with it ; and the ligaments which enter into the formation of the ankle joint.

2. Describe the origin, course, distribution, and anatomical relations of the great sciatic nerve.

3. Describe the small intestine from the pylorus to the ileo-cæcal valve, giving an account of its structure, anatomical relations, vascular supply, and innervation ; as also of its functions and the processes carried on in different portions of the length of the tube.

4. Describe the parotid and submaxillary glands, giving an account of their anatomical relations, structural innervation and blood supply, the functions they perform, and the chemical and physiological character of the fluid they secrete.

5. Describe the dissection by which you would expose the subclavian artery, mentioning the parts of importance which would be also exposed, and their anatomical relations.

SURGERY.

MR. POLLOCK.

Monday, August 12, 1889—from 2 p.m. till 5 p.m.

1. Describe the symptoms by which syphilitic eruptions may be distinguished from those of a non-syphilitic origin, and the treatment to be adopted in the different varieties of the former.

2. Describe the dislocations common to the elbow joint, the complications which frequently attend them, the modes of reduction, and subsequent treatment of the limb.

3. A patient is the subject of femoral hernia. Describe the symptoms indicative of its becoming strangulated, the operation for its relief, and the general and local after treatment.

4. What are the usual causes of retention of urine in old age, and the best measures for its relief? What subsequent conditions are likely to arise which require the attention of the surgeon?

5. Describe the symptoms which would indicate fracture of the base of the skull, and the treatment to be pursued under the varying circumstances of such an injury.

6. A patient is the subject of a punctured wound in the groin attended by arterial hæmorrhage, what treatment should be adopted in such a case?

MEDICINE.

SIR WILLIAM AITKEN.

Tuesday, Aug. 13, 1889–from 10 a.m. till 1 p.m.

1. A case for commentary—

In January 1884, a lad, aged 20, began to have spasms (described as 'cramps') in the left thumb and forefinger. These spasms or cramps consisted of 'clonic' opposition of these named digits, occurring about twice a day for three successive months. The first severe fit happened in March 1884. Spasm spread up the arm, and the patient fell. He had a second fit in January 1885 ; and another severe fit commenced a series of them, occurring once or twice a week, until admission to hospital on Dec. 4, 1885. The character of the fits was almost always the same. They began by 'clonic' spasmodic opposition of the thumb and forefinger of left hand ; the wrist next, and then the elbow and shoulder were flexed clonically, then the face twitched and the patient lost consciousness. The hands and eyes then turned to the left, and the left lower limb was drawn up. The right lower limb was next attacked, and, finally, the right upper limbs. Paralysis of the left upper limbs frequently followed a fit. At frequent intervals every day the patient's thumb would commence twitching, but progress of the convulsion could often be arrested by stretching the thumb or applying a ligature on it. In February and March 1886 the twitching frequently commenced in the face, but again in April the thumb was the most frequent seat of origin of the fit.

On admission his condition was as follows :—(1.) As to *Power of Motion*—The grasp of left hand recorded 45, that of his right 85. He could perform all movements with the left upper limb ; but those of the left hand were enfeebled. The left thumb was frequently in a state of rigidity, alternating with clonic spasm, a condition which could easily be induced by manipulating the thumb. (2.) As to *Sensation*—There was no affection save loss of muscular sense in the left thumb. (3.) As to *Deep Reflexes*—They were exaggerated in the left upper limb. The patient frequently had severe headache, beginning at the occiput and shooting forward, especially towards the right parietal region. (4.) As to *Optic Discs*—They appeared to be very pink, a condition of physiological hyperæmia.

Under these circumstances, on June 22, 1886, a tumour of a tubercular character was removed from the brain by a surgical operation, and by July the patient had recovered, having had no fits since the operation.

In commenting on the nature of the above case, explain what is meant by (1) 'Spasm'; (2) 'Tonic spasm'; (3) 'Clonic spasm'; (4) 'Co-ordinated spasm'; (5) 'Jacksonian epilepsy'; (6) explain the method of analysing the convulsive symptoms in this case which point to lesion in a definite region of the brain ; (7) define by an ink line on the accompanying brain charts the motor region of the cerebral cortex, and mark with a × on the same chart the probable site of the tumour. (*Be so good as to attach the chart so marked, by its gummed surface, to your written answer to this question.*)

2. Explain the meaning of Lithæmia, and nature of the ailment it designates ; describe the symptoms and treatment of the condition.

3. Discuss the Pathology of Typhlitis and Perityphlitis as regards :—(1) The origin ; (2) the course of these affections. Describe how these conditions are diagnosed from other affections ; and, lastly, give details as to treatment.

4. Acquired diseases of the heart in children (as distinguished from congenital affections) present certain peculiarities of practical importance. Write what you know regarding these peculiarities as to (1) the parts of the heart involved, and character of the pulse in children ; (2) the causes of the lesions and the principles which ought to guide the treatment.

5. Discuss the principles by which you would be guided as to the use of Acids or Alkalies in the treatment of chronic dyspeptic conditions ; and as regards the time for the administration of such remedies.

NATURAL SCIENCE.

DR. ALLMAN.

Tuesday, August 13, 1889—from 4 p.m. till 6 p.m.

Zoology.

1. Enumerate in their order from without inwards the fundamental germinal layers of the vertebrate embryo. Which of these gives origin to the brain and spinal cord, and which to the vascular system?

2. What is meant by a water vascular system? Name one or more examples of its occurrence in the animal kingdom.

3. Name the animal defined by the following characters :—Notochord persistent ; spinal chord not presenting at its anterior extremity a distinct brain ; respiratory organ in the form of a dilated pharyngeal sac ; the place of the heart taken by pulsatile vascular trunks.

Botany.

4. By what anatomical characters may such flowerless plants as present a distinct stem and foliage be divided into two main groups? Give one or more examples of each of these groups.

5. What phenomenon in the life of plants admits of the closest comparison with the respiration of animals?

6. Refer to its natural order a plant with the following characters, and give one or more examples :—Corolla gamopetalous, with the lobes imbricate in æstivation, bilabiate ; calyx with five, more or less, united sepals, persistent ; stamens inserted on the tube of the corolla, didynamous ; ovary, superior two-celled, with the placenta in the axis ; fruit, a two-valved capsule ; seeds numerous ; albuminous.

Physics.

7. A stone dropped into a well strikes the water at the end of three seconds, at what depth in feet is the surface of the water from the mouth of the well?

8. At what angle must a ray of light be incident on a plane reflecting surface in order that the reflected ray be at right angles with the incident ray?

9. To what degrees of Fahrenheit's thermometer do the following degrees of the Centigrade respectively belong :—100°, 96°, 29°?

The London Medical Recorder.

ARTICLE 2082.

MONTHLY MIRROR OF MEDICAL SCIENCES.

MEDICINE.

Further experience of suspension in locomotor ataxy.

FURTHER experience of the suspension treatment in this country scarcely confirms the roseate expectations which practitioners were led by Continental authorities to anticipate. The cause may possibly lie in some ethnological peculiarity, Englishmen being notoriously much less impressionable than Frenchmen, for example. Perhaps, too, English physicians are less easily carried away from the *terra firma* of cool judgment by the wind of scientific enthusiasm than some of their foreign brethren. However that may be, the comparative failure of the method here, as contrasted with the brilliant success claimed for it abroad, is an interesting fact which should be borne in mind when wonderful results in other directions are announced in other countries. Dr. Saundby, of Birmingham, who was one of the first to try suspension in this country,* has recently reported † six cases in which he gave the method a further trial. In all cases the suspension was carried out for a short time at first, usually for 15 or 30 seconds, and the time was increased daily until the patient could bear 4 minutes. In only one of the six cases were any really uncomfortable sensations complained of; in that case the patient became pale and felt sick and faint on one or two occasions, but recovered completely in about half an hour. The following is a brief summary of the cases. 1. Man, aged 52; illness of nine months' standing; suspended 30 times. Was able to pass water naturally and to walk about better; pains not so severe, but recurred at times; decidedly improved. 2. Man, aged 34; illness had lasted between one and two years; suspended 33 times. When discharged, bladder trouble had gone, but other symptoms were just as before. 3. Man, aged 40; illness of some years' standing; suspended 23 times. When discharged he was suffering less pain, but walked quite as badly as at first. 4. Man, aged 69; duration of illness not stated; suspended 5 times. Could walk no better, but general health improved. 5. Man, aged 43; duration of illness eight years; suspended 10 times in all, but bore treatment badly. Could walk better, but pain still severe. Some time after discharge the patient stated that he was engaged to ride in some bicycle contests, so that he had probably improved. 6. Man, aged 34, duration of illness about one year; suspended 10 times; refused to continue treatment as he thought it brought on the pains. Discharged in *statu quo*. Dr. Saundby sums up the results as follows: 'It cannot be definitely stated that any one of these cases derived benefit from the suspension; E. G. (Case 1) certainly improved under treatment and was able to walk better when he left the hospital, but the influence of the suspension on the result was doubtful.' In Case 5 the improvement seems to have been *in spite of* the suspension. Five cases in which the plan was tried have also been reported by Mr. J. R. Lunn, medical superintendent of St. Marylebone Infirmary.* The following is a summary of them. 1. Man, aged 58; duration of illness between six and seven years; suspended 28 times for periods ranging from 40 seconds to 4 minutes, at intervals of a few days. 'He improved remarkably, and on leaving could walk over half a mile without a stick; no change in ataxic character of gait or in the sensation of the feet and legs.' 2. Man, aged 57; duration of illness between thirteen and fourteen years; suspended 15 times. No improvement. 3. Woman, aged 45; illness of from four to five years' standing; suspended 15 times; declined further treatment. No improvement. 4. Man, aged 73; duration of illness between ten and eleven years; suspended 3 times; refused to submit to more. No improvement. 5. Man, aged 52; duration of illness between five and six years; suspended 9 times. No improvement. In only one, therefore, of the five cases were favourable results obtained. In all of them the suspension caused either pain or giddiness. Dr. Churton, of Leeds, has also expressed an unfavourable opinion of suspension,† but apparently more on the 'high *à priori*' ground than on adequate experience. He appears so far to have actually tried it in only one case, that of a man, aged 39, who had had ataxic symptoms for about a year and a half. This patient was suspended daily for 5 minutes from May 22 to June 3, 'when it was noted that there was not the smallest improvement in any way; indeed, he was worse.' It will be noted, however, that Dr. Churton did not apply the treatment in quite the orthodox manner. He began with what may be called a very 'stiff dose,' and continued it all through at rather high pressure. On the other hand Dr. Julius Althaus professes to have had a satisfactory result in a very unpromising case.‡ The patient was a gentleman, aged 56, who had been under observation since November 1885, and was in an advanced stage of the disease. Suspension was begun in March of the present year; the first time for half a minute, the second time for one minute, and the third for a minute and a half. 'After the third suspension improvement set in, more especially in walking; and from that time the patient made rapid strides towards recovery.' He was suspended altogether 33 times, and then felt so well that he could discontinue his visits. Dr. Althaus adds, 'The knee-jerk, which had been absent certainly since November 1885, and possibly longer, reappeared in June last, this being, as far as I am aware, the first, and as yet the only case in which such a result has occurred after suspension.' On Sept. 26 the patient was again seen by Dr. Althaus, who found him 'in good working condition, the only symptom which remained being some degree of anasarca.' During the five years that this patient had been under observation before suspension was commenced, every therapeutic measure that could be thought of was tried without the least result. Dr. Ladame, of Geneva,§ has also obtained good results from suspension. He has practised the method 282 times in 16 cases of spinal disease (15 of tabes and 1 of Friedreich's ataxy), the greatest number of suspensions in individual cases varying from 29 to 35. The operation was performed on alternate days, the suspension lasting from two to three minutes in patients weighing from 11½ to 14 stone, and four minutes or even more in those weighing from 7 to 10 stone. In several cases decided improvement took place, but in others the result was *nil*. In those cases in which benefit was derived from the treatment, there was usually a slight relapse after the first few suspensions, followed by steady and apparently permanent amelioration, which began to show itself between the twentieth and thirtieth operations.

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* See *British Medical Journal*, 1889, vol. v., p. 469.
† *British Medical Journal*, Sept. 14, p. 602.

* *British Medical Journal*, Oct. 5, p. 765.
† *British Medical Journal*, Oct. 12, p. 818.
‡ *Ibid.*, Oct. 19.
§ *Revue Médicale de la Suisse Romande*, June 1889.

Epilepsy following vaccination.

Dr. Althaus* has reported a case in which epilepsy was apparently set up by vaccination. A healthy lad of 19, who, neither in his family nor in his personal history, showed the slightest trace of neurotic tendency, was revaccinated in the ordinary way on being taken into the service of the Post Office. The vaccine caused somewhat severe symptoms, but these soon passed off. A month after the operation he was seized with an epileptic fit, and since then he has had attacks of great severity about once a month. There is no doubt as to the nature of the fits, and no other cause but the vaccination can be assigned for them.

SURGERY.

Necrosis of the alveolar processes following measles.

Mr. R. Clement Lucas,† surgeon to Guy's Hospital, has lately recorded two cases in which exfoliation of the alveolar processes of the jaws appeared to follow an attack of measles. The first was that of a boy, aged 3, who five weeks before coming under observation had suffered from measles and inflammation of the lungs. After recovery, it was noticed that there was something wrong with his mouth. On examination it was found that on the front of both the upper and lower maxillæ, and limited to the anterior or central parts of both alveoli, there was a greenish-black piece of necrosed bone. The disease appeared confined to the alveolar process. The four incisor teeth had dropped out from the necrosed portion of the upper jaw; in the lower, the necrosis, besides involving all the incisor sockets, included those of the two canines. Mr. Lucas removed the necrosed portions with forceps. The piece taken away from the upper jaw was nearly quadrilateral, measuring three-quarters of an inch both vertically and transversely, and contained the sockets of the four incisor teeth. That removed from the lower jaw contained all the incisor sockets together with half the socket of the canine tooth of the right side and the whole socket of the corresponding tooth of the left side. The patient did well. The other case was that of a little girl of the same age. The main features were the same, but the destruction was even more extensive.

Brain surgery in France.

At a meeting of the Paris Académie de Médecine, on August 20, Dr. Lucas-Championnière gave a summary of his operations on the brain, and related the following case. A man, aged 53, had, two years previously, had an attack of apoplexy which had left behind it paresis of the right lower limb, together with some difficulty of speech, contracture of the right hand, and epileptiform seizures. These symptoms were gradually increasing in severity. A hæmorrhagic focus was diagnosed about the middle portion of the ascending frontal convolution. The skull was trephined over the middle of the 'Rolandic line,' the opening touching the anterior half of the motor zone. On incising the dura mater, there was seen in front of the vein lying in the fissure of Rolando a sort of opalescent membrane formed by the fusion of the arachnoid and the pia mater, and covering an old cerebral hæmorrhage, which occupied the substance of the ascending frontal convolution. The outer layer of this deposit was laid freely open, the rust-coloured *débris* removed from its interior, and the cavity washed out with carbolised solution (1 in 20) and sublimate lotion (1 in 1,000). With the exception of an epileptiform attack on the following day, which ceased on removing a drainage-tube which had been left in the wound, the improvement in all the symptoms was rapid and permanent. Dr. Lucas-Championnière presents this case as a new departure in brain surgery, there having been no previous instance in which trephining has been performed for spontaneous cerebral hæmorrhage. He gave the following summary of his work in this department of surgery. 1. *For giddiness and pains in the head*: four patients, nine operations. In two cases, complete and permanent cure; in one of these the patient was trephined four, in the other three times. 2. *Epilepsy following fracture of skull*: four cases, all cured. 3. *Severe pain following blows on the head*: two cases, both cured. 4. *Incomplete right-sided paralysis with epileptiform crises*: one case, very greatly improved by removal of a bony overgrowth of skull. 5. *Hydrocephalus*: one case, with temporary improvement. 6. *So-called idiopathic epilepsy*: eleven cases. Three cases apparently cured, three others considerably improved. These results are, in Dr. Lucas-Championnière's opinion, 'very important, if the poverty of our therapeutical resources against epilepsy is taken into account.' These had been entirely exhausted in the course of those cases, including, in the more recent of them, the application of the actual cautery to the skull. At a recent meeting of the Société des Sciences Médicales de Lyon,* Dr. Mouisset showed a case in which trephining had been successfully performed for aphasia. The patient was a man, aged 29, of alcoholic, and probably syphilitic, antecedents, who had suffered for about five years from epileptic attacks. A recent fall had been followed by prolonged unconsciousness and persistent aphasia, with paresis of the right arm, slight paralysis of the face and tongue on the same side, and 'Jacksonian crises.' He was trephined by M. Jaboulay, who found a hæmatoma of the dura mater. The hæmorrhagic accumulation was removed, and the cavity cleaned out. The next day, while the plugs, which had been left in the wound for fear of hæmorrhage, were being taken out, the patient spoke some words distinctly for the first time since his fall. Improvement was steadily progressive, and the aphasia disappeared in eighteen days.

A new diagnostic sign of abscess of the antrum.

At the Congress of Otology and Laryngology, held at Paris last month, Dr. T. Heryng, of Warsaw, described a new diagnostic sign to which his attention was called by the late Professor Voltolini. The room being darkened, the patient's mouth is lit up by means of a small electric lamp placed above the tongue. Two spots of very bright red, of greater or less extent according to the size of the antrum, then become visible below the lower eyelids. If the cavity is filled with pus or occupied by a tumour, its front wall is no longer transparent, and the bright red spots are not seen. Dr. Heryng said he had noted the presence of this sign in ten cases which he had recently seen; he also observed that the wall became again transparent when the pus had escaped and the cavity was washed out.

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* *British Medical Journal*, Sept. 28, p. 719.

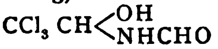
† *Lancet*, Oct. 5, p. 692.

* *Lyon Médical*, Oct. 6.

THERAPEUTICS.

A new hypnotic.

'The cry is still They Come!' New hypnotics pour in upon us; the last one being always heralded as the long-sought *φάρμακον νήπενθες*, which is to 'knit up the ravelled sleeve of care,' and banish insomnia from a nerve-afflicted world without causing sickness or headache, or a degrading and enslaving habit. Chloralamid, recently introduced by Professor von Mering, of Strassburg, has the following formula—



$$CCl_3\,CH\!<\!\begin{matrix}OH\\NHCHO\end{matrix}$$

and consists of colourless crystals which dissolve in 9 parts of water with 1½ of spirit 68 over proof. Weak acids cause no alteration in the solution, but alkalies decompose it. Experiments on the physiological action of the new drug have been made by E. Kny,[*] who injected 0·025 to 0·03 gramme of a watery solution into frogs, with the result of reducing them to an inert sleepy condition, from which they did not fully recover for two or three days. Rabbits who received from 1½ to 2 grammes by the stomach fell into a deep sleep in from twenty to twenty-five minutes; in from ten to twelve hours they became quite lively again. The effect of chloralamid on healthy men was tested by Hagemann and Strauss.[†] It was given to six students in doses of from 1 to 4 grammes, with the result that they all slept two hours longer than usual. On awakening they felt 'quite fresh.' Two, however, complained of slight headache after taking the dose. Neither in these nor in some other experiments by Hagen and Häfler[‡] were any special effects on the circulatory or respiratory organs or the kidneys noticed. Moreover the digestion was not at all disturbed. Sleep is said to come on as a rule half an hour after administration, and we are assured that the effect is 'absolutely certain.' Mering gives 3 grammes as a dose to produce sleep, but other practitioners gave from 2 to 3 grammes. Hagemann and Strauss recommend that 1 gramme should be given at first; this they have often found sufficient. Chloralamid has been used with advantage in the sleeplessness of phthisis, in disease of the spinal cord, and in various neurotic conditions (alcoholism, neuralgia, melancholia, &c.). Otto Halasz[§] also gives a glowing account of the new hypnotic. He tested it on himself and two colleagues, with the result that within one hour they became drowsy and 'slept the whole night through without a break, although one of them was a very light sleeper.' Halasz further reports good results in cases of insomnia from heart disease, amyotrophic lateral sclerosis, phthisis with racking cough, cancer of the stomach, &c. In the reports of several of the cases, however, it is noticeable that the patients on waking complained of feeling 'stupid,' 'giddy,' 'heavy as lead,' &c., and headache seems a by no means infrequent phenomenon. In several cases also the drug fails after the first few doses, just like every other hypnotic that has ever been tried. Chloralamid, therefore, even on the showing of its own advocates, is not the ideal 'drowsy syrup of this world.'

LARYNGOLOGY.

Congenital polypus of the larynx.

Very few cases of congenital growth in the larynx have hitherto been recorded, but it is highly probable that the occurrence is by no means so rare as the scarcity of observations would seem to imply. The difficulties of laryngoscopic examination in early infancy are very great, and the symptoms—hoarseness of cry and difficulty of breathing—are put down to hypothetical causes. A case of 'congenital polypous laryngitis' was reported by Dr. Carlos M. Desvernine to the Academia de Ciencias, of Havana, on Aug. 25.[*] The patient was a delicate strumous boy of 7, who had suffered from dyspnœa and hoarseness since birth. Exploration of the chest revealed signs of tracheal or laryngeal obstruction, while the laryngoscope showed that the whole of the right and two-thirds of the left side of the vestibule of the larynx were occupied by a series of lobulated growths pale yellow in colour. Dr. Desvernine was able to count seven distinct tumours which, at least at their upper extremities, seemed to be completely independent of each other. The only pervious part of the laryngeal orifice appeared to be a small space in the right posterior angle of the glottis. Surgical interference was declined by the parents till a few weeks later when tracheotomy had to be performed to save the little patient from impending asphyxia. When he had recovered from the operation, Dr. Desvernine proceeded to attempt to extract the growth with forceps, operating at intervals of from three to six weeks, as each sitting was followed by acute congestion. When a considerable clearance had thus been made, an eighth tumour was discovered deeply situated below the glottis, on the right side. The size of this growth and the breadth of its base making it impossible to remove it through the mouth, laryngotomy was performed. The tumour was found firmly attached to the right upper edge of the cricoid cartilage, occupying almost the whole of its laryngeal surface on that side. It was cut away with curved scissors, the seat of implantation being afterwards thoroughly curetted. The operation was well borne, but the skin wound became the starting point of scrofulous ulceration, and this was complicated by severe general furunculosis. A few months later the voice again became hoarse, and a ninth growth was discovered attached by a pedicle to the right vocal cord, close to the arytenoid cartilage. This was extirpated with cutting forceps, the point of attachment, as well as the whole upper surface of both vocal cords, being then cauterised several times with chromic acid. Three months later, Dr. Desvernine made 'a scrupulous laryngoscopic examination, and, finding a larynx absolutely sound, without the slightest trace of what had happened in it,' he removed the tracheotomy tube which had been worn till then. Since that time both respiration and voice have been normal. The growth on microscopic examination presented the characters of papilloma covered with stratified epithelium. Dr. Desvernine gives a summary of all the cases—sixteen in number—of congenital laryngeal polypus, which he has been able to find recorded in medical literature.

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[*] *Therapeutische Monatshefte*, August.
[†] *Berlin. klin. Wochenschrift*, 1889, No. 33.
[‡] *Münch. med. Wochenschr.*, 1889, No. 37.
[§] *Wiener med. Wochenschr.*, 1889, No. 38.

[*] *Revista de Ciencias Medicas*, Sept. 5, 1889.

Perforation of nasal septum in cement-workers.

Mr. A. G. R. Foulerton, resident assistant surgeon to St. Bartholomew's Hospital, Chatham, recently described[*] a peculiar lesion of the nasal septum which occurs in cement-workers. It occurs as a round perforation, situated a little above the columna and close to the floor of the nostril. It varies in size and gives rise to no symptom beyond a slight discharge from the ulcerating edges. Mr. Foulerton believes that it is caused by frequent 'picking the nose' in order to clear out the dry cement dust which is drawn into the nostrils. It is well known that similar perforations are often found in workers in arsenic and in those exposed to chrome fumes. There is also a rarer form of perforation, due to tubercular ulceration, and a hole in the septum may also be left as the result of abscess or hæmatoma following injury. The condition is also occasionally congenital. It is important that all these possible causes of perforation of the septum should be borne in mind, so that it may not, as is often the case, be at once interpreted as a proof of syphilis.

Balsam of Peru in the treatment of ozæna.

Practitioners who see much of ozæna know well that it is one of the most intractable of diseases. Even with frequent washing out of the nasal passages with antiseptic lotions and sprays, with medicated bougies, and with cotton-wool plugs applied in the manner recommended by Gottstein, only the most transitory deodorisation of the breath from the nostrils can be effected, and patients and their friends are driven almost to despair. Any new suggestion for the relief of this disgusting complaint will therefore be welcomed. Dr. W. Ebstein has lately reported very satisfactory results obtained by Dr. Rosenbach with balsam of Peru.[†] The mucous lining of the nasal fossæ is painted every day with the medicament, and a plug of cotton-wool soaked in it is left in the deep parts of the nose. By this means Dr. Rosenbach has succeeded in cases in which every other antiseptic and deodoriser had been tried in vain. It is not probable, however, that experienced practitioners, who have often been disappointed with the effect of the most promising suggestions for the cure or mitigation of ozæna will be disposed to pin their faith too lightly on any new remedy, more especially, perhaps, in the case of Peruvian balsam, which seems just at present in some danger of becoming a panacea in the hands of some of our German brethren.

ARTICLE 2083.

DERCUM ON SPINAL INJURIES ('RAILWAY SPINE').

THE following is the full title of Dr. Dercum's paper recently addressed to the Medical Jurisprudence Society of Philadelphia :—'Remarks on Spinal Injuries, more especially "Railway Spine," with Hints on Expert Testimony' (*Therapeutic Gazette*, No. 5, 1889). To show the magnitude of the money interests alone involved, one writer has estimated that 'in the course of about a dozen years at least 20,000,000 dollars have been paid out in this country (America) and in England.' The results of suits for compensation for railway injuries in many cases, if not in most, hinge entirely upon expert testimony. This paper is addressed partly to lawyers, and not to a purely medical society. The term 'railway spine' is objectionable. It does not indicate any one clearly defined spinal injury, for the injuries to the spine after railway accidents are most various. Nor do the injuries occurring on railways differ from other injuries due to the most varied accidents—falls, explosions, blows of all kinds.

Spinal injuries may be roughly divided into three groups—viz. (1) contusions or strain of the various tissues surrounding the spinal column, without actual damage to the cord; (2) fractures and dislocations of the spinal column; (3) a group containing all those cases in which nervous symptoms are marked, but in which external proof of accident is wanting. This last group includes, first, cases of injury to the spinal contents—*e.g.* concussion, hæmorrhage, followed by inflammation and degeneration; secondly, 'those cases in which no other symptoms are present than those of a persistent loss of nervous tone, or that unstable state which we call hysteria.' These groups overlap. Classifications are only pegs on which to hang our ideas; but the one above given is more useful for our present purposes than a more elaborate classification based solely upon symptomatology.

In the first group the skin may or may not be discoloured, the muscles may show decided 'swelling and distortion,' but the chief symptoms are, excessive tenderness and pain on motion. In addition, there is the history of the case, showing sudden flexion or twisting. Involuntary spasm of the various spinal muscles is also an important symptom. Rest for weeks or months is necessary; muscular sprain is, of course, more favourable than ligamentous. The following is an illustrative case :—'An old gentleman, 78 years of age, but in excellent health, and of a very long-lived stock, was thrown forward, while standing, by the unexpected starting of the train. He fell at full length, striking in his course his forehead against the door of the car in such a way that his head and neck were bent violently backward. When I saw him his head was held in an absolutely fixed position, while the tissues of the neck were everywhere exquisitly sensitive to deep pressure, and the slightest jar would give excruciating pain. The muscles of the back of the neck were hard and rigid, as though in constant spasm. In this case, the man being in comfortable circumstances, the question of a suit for damages was never raised, and he certainly was very anxious to get well. Several months afterwards, when last heard from, there had been no change in his condition.' It is extremely probable that all the dense fibrous tissues about the spinal column, including the intervertebral cartilages, had been strained. There were no symptoms showing injury to the spinal cord itself. (*See* Hilton on 'Rest and Pain' for other cases.) In the prognosis, the expert should be guided by the fact that a muscular is more favourable than a ligamentous lesion, and that pain readily excited by transmitted shock, as by a tap on the head, suggests injury to the intervertebral cartilages, or the vertebral bodies themselves. Purely spinal-cord symptoms should be looked for, and it must be remembered that Pott's disease of the spinal column may be the result of a blow or fall after perhaps a long interval of time. Bloody urine after severe contusion of the back always indicates laceration of the renal tissue.

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[*] *Lancet*, Aug. 17, p. 314.

[†] *Deutsche med. Wochenschr.*, No. 6.

The second group may also be discussed briefly. Fractures of the spine very seldom require the services of an expert in a court of law to establish their existence. Even when there is no displacement the symptoms of fracture are characteristic.

The third group embraces cases of nervous symptoms, without visible evidence of injury. The first of its subdivisions deals with' cases of actual injury to the spinal contents—viz., concussion, hæmorrhage into the spinal marrow or its coverings, inflammatory changes, and late on-coming degeneration. The second subdivision deals with those cases in which no other symptoms are present than those of a persistent loss of nervous tone, or symptoms referable to hysteria, complicated, it may be, by a phychosis. This group is undoubtedly by far the most important. Indeed, many writers appear to restrict the expression 'railway spine' to this class of cases. They are sometimes extremely difficult of solution, and they have on more than one occasion given rise to hard-fought legal battles. A trauma sufficient to injure the dura mater, apart from fracture or dislocation of the vertebræ, is excessively rare. Still the occurrence of traumatic pachymeningitis is not an impossibility. Leyden gives one case * of doubtful character, and another which was substantiated by the autopsy. Perimeningitis, *i.e.* external to the dura mater, is not at all improbable.

As to coarse hæmorrhage into the cord or its membranes, 'no one, not even Page.' denies the possibility of this. It is very frequently fatal, and in the few cases that live the wasting and paralysis are too marked to give rise to any question as to damage. A small hæmorrhage into the membranes, followed by partial recovery, may give rise to question, and will be discussed further on.

Next comes that bone of contention, *true* spinal concussion—*i.e.* where loss or perversion of function follows a blow. The change is sometimes accompanied by slight structural change—capillary hæmorrhages; very often, however, no visible change can be detected, and the alteration, whatever it may be, is molecular, and has been compared by one of our writers to the loss of its properties by a magnet when it is struck by a blow. Concussion 'has been freely and excessively admitted, notably by Erichsen, and, on the other hand, has been as frantically and absolutely denied, notably by Page.' The latter says, 'We know of no case, nor can we discover the history of any case, where a transient paraplegia has followed a concussion of the spine.' Dr. William Hunt † has cited three such cases. 'In 1881 a boy came under my care,' says Dr. Hunt, 'who was shot in the back three inches to the right of the third or fourth dorsal vertebra. He at once had characteristic symptoms in the legs of being wounded in the spine in such a way as to affect the cord somehow. There was partial paraplegia, with pain in both limbs. Under rest these symptoms soon disappeared. In a few days I made a deep incision and removed some clothing and fragments of bone, and then from the depths of the spinal gutter I took a large conical ball which was resting against the bony ridge of a vertebra. The boy recovered rapidly. I saw him some months after perfectly well. Surely this was a case of spinal shock or concussion with transient paraplegia, and the cause of it could have been nothing else than the impact of the ball against the column, producing vibratory jar sufficient to affect the cord. The immediate symptoms and the rapid and complete recovery are, in my opinion, inconsistent with any theory of congestion or pronounced lesion of the medulla.' Another case recorded by Dr. Hunt was that of a man who, falling from a considerable height, landed on his feet. The force of the impact was sufficient to fracture both calcanea. In addition there was paralysis of the legs and loss of control over the bladder and bowels. The man recovered, the spinal symptoms improving along with the fractures. As a third instance the doctor cites the well-known case of President Garfield, in whom a bullet struck the spinal column, concussed the cord, and produced temporary loss of power in the legs.

These cases (continues Dr. Dercum) constitute undoubted and undeniable concussion. Further, the paraplegia need not necessarily be transient; on the contrary, 'the symptoms accompanying shock may persist indefinitely.' A man, aged 45, fell backwards down a stairway after drinking and struck the last step almost vertically with the shoulders and back of the neck. His symptoms were those of shock; the man was unable to move hand or foot, and the pupils were dilated. The next day he was still completely paralysed in both arms and legs, the respiration was almost wholly diaphragmatic, the urine was retained, and the bowels were obstinately constipated. There was never vomiting. Sensation was impaired, nowhere lost. After six weeks' rest he had so far recovered as to be able to leave his bed, and to a certain extent had regained power in the arms. The deltoids, however, were still almost completely paralysed, and there was decided weakness of all the other arm muscles, especially of the extensors of the forearms. About a year later, when I saw him again, decided wasting had taken place in the paretic muscles.

That organic changes of the cord result from blows and shocks to the back is maintained by authorities of no less weight than Spitzka, Gowers, and Edes.* Gowers not only places blows upon the back among the causal factors of both lateral and posterior sclerosis, but even maintains that damage to the cord by concussion of the spine, either general or local, is far more common than direct injury, *i.e.* injury resulting from fracture or dislocation, or from gunshot wounds or stabs. The cases are divided into three classes, according as paralysis comes on immediately after injury, a few days or weeks afterwards, or several months afterwards. Thus the spinal cord may be injured without injury to the spinal column.

Lastly, we come to the 'nervous' cases, in which the symptoms point to loss of nervous tone, or hysteria, or possibly a form of insanity, and in which no evidence of a structural injury can be found. The whole nervous system is involved, not the spinal cord alone; indeed, the term 'railway brain' has been applied to these cases, which are so difficult to determine, including as they do the malingerers as well as the honest sufferers. For traumatic neurasthenia and traumatic hysteria (and traumatic insanity) do actually occur; no one now denies this.[*]

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* Leyden, *Klinik der Rückenmarkskr.*, vol. ii., p. 406; also *Archiv für Psychiatrie*, 1878, vol. viii., p. 31.

† HUNT.—'Concussion of the Spine,' Pepper's System, vol. v., p. 913.

* SPITZKA.—'Disseminated Sclerosis,' Pepper's System, vol. v., p. 884.

GOWERS.—'Diseases of the Nervous System.' Also DUMÉNIL and PETIT; 'Commotion de la Moelle Épinière,' *Arch. de Neurologie*, 1885, pp. 1, 145, 307.

EDES.—In *Boston Medical and Surgical Journal*, Sept. 21, 1882.

Two cases of mild and pronounced hysteria respectively after accidents are cited by the author at length, also a pronounced case of combined traumatic hysteria and neurasthenia in a man (after a series of accidents at several months' or years' intervals). The prognosis in simple hysteria is far better than in neurasthenia.

After again calling attention to the fact that the above classification is purely arbitrary, that the cord may be damaged in simple sprain, and that there may be actual structural change when the symptoms are undoubtedly hysterical, the author passes on to the class of malingerers. Here the expert must rely largely upon his mother-wit. 'Distinction between actual and simulated organic disease can, as a rule, be readily made, though between simulated disease and hysteria the line is somewhat hard to draw. Hysterical functional disease is, however, real as far as the patient is concerned, and needs no active effort on the part of the patient to maintain its outward manifestations, while in the malingerer a constant effort is required, and, if closely watched, he may be caught napping. Further, there is a marked difference, as a rule, in the mental attitude. The hysterical patient is generally emotional in the extreme, and presents such typical symptoms as globus hystericus, clavus, or even typical hysterical hemianæsthesia. The malingerer is, on the other hand, a complacent, often argumentative, liar, and occasionally displays a superficial acquaintance with technical terms, as if he had studied his part. Not infrequently he contradicts himself, and can by leading questions be trapped into the grossest absurdities.' His physical aspect is wholly different also. The paper ends by calling attention to the 'exaggerations, voluntary or involuntary, of people who are really hurt, or who honestly believe they have been hurt.' [*See* London Medical Recorder, January 1889, for Knapp's paper; *ibid.* (review of Oppenheim's *Die Traumatischen Neuroses*); November 1888 (discussion on Knapp's paper).]

E. J. Edwardes, M.D.

Article 2084.

BROOKE ON THE RELATIONS OF THE SEBORRHŒIC PROCESSES TO SOME OTHER AFFECTIONS OF THE SKIN.

In the June number of the *Brit. Jour. of Dermatology*, Dr. Brooke draws attention in a paper to the importance of seborrhœa in relation to some other affections of the skin.

The primary lesions of seborrhœa are as follows:—

I. *On the scalp*, which is almost always affected, where seborrhœa exists anywhere on the body. The condition generally met with being a slight greasy scurfiness, varying in degree according to the nature of the skin and the cleanliness of the individual. In some the scales are almost dry, in others the amount of grease secreted is so great that the head appears as if artificially anointed. If the fatty secretion be of a solid nature or of old standing, it forms dirty, yellowish, closely adherent cakes, which, if mixed with a copious desquamation of epidermis, may produce a thick mass which looks as if formed of small blocks of half-dried cheese.

Well-marked seborrhœa may exist for years in conjunction with a thick and vigorous growth of hair, whilst some of the slighter and drier forms are not unfrequently found to have determined a marked defluvium and consequent baldness.

II. *On the face*, the most frequent symptoms are the presence of dull yellowish patches of various consistency. At times they are little more than stains of ill-defined outline, but presenting a slight roughness to the touch. More commonly they are of a marked dull reddish-brown tinge, more or less greasy, and slightly squamous. Very frequently some hyperæmia accompanies the affected spots, which then stand out as reddish blotches, covered with a greasy coating. These chronic hyperæmic patches often last for a long time after all traces of acute seborrhœa have disappeared from them, but the remains with their clear outline and faint reddish or brownish-red colour are sufficiently distinct, especially when at a distance of two or three feet, to indicate that the process has been at work there.

Their diagnosis is readily confirmed by the existence, generally at the edge of the patches, of papules of various sizes, which are either surrounded with a fringe of broken epidermis or are covered with the typical greasy scales.

Even when no hyperæmic condition is visible, more or less faint stains of a yellow brown colour are left as indices of the previous eruptions. As Unna points out, it is the middle third of the face which constitutes the site of predilection, and in a large number of cases the lesions are almost exclusively confined to this region.

The nose, alæ of the nostrils, and naso-labial furrow present the best marked examples of the greasy forms. As the distance increases from the middle line the amount of oily fat tends to diminish, and the squamous covering becomes drier.

There is near the angles of the mouth in dark-complexioned people a conspicuous and disfiguring dirty yellow brown stain, from constant recurrence.

III. *On the limbs and trunk* it occurs in patches, the best marked lesions being situated on the chest and back. In these sites its characters are quite distinct, the outline is not very clearly marked, and quite frequently emerges imperceptibly at its borders into the adjacent skin. The discoloration may be very slight, so as to be hardly distinguishable from the healthy skin, or pigmented with a shade of a faint yellowish brown; or, as is most frequently the case, it presents a faint tint of salmon colour. In all cases, however, the skin is covered with furfuraceous scales.

The peculiar salmon tinge which some of the eruptions take on, appears to arise from the superposition of the yellow colour of this greasy secretion, plus the dirty yellowish colour which normally develops in masses of cornified epithelium, glazing over the pink of the subjacent hyperæmia. When no hyperæmia is present, the colour is derived from the grease and epithelium alone, and may be either of a deep dirty yellow, as in old secretions of the scalp, or of any shade approaching that of the healthy skin. This condition may prevail for years without much alteration. At times the affected parts become hyperæmic, and the hyperæmia may remain in a chronic form, or it may be quite transitory. In the great majority of cases the disease is limited to the scalp. As Unna insists, it is from this region that seborrhœic affections of the rest of the body almost invariably originate. These constitute the common indications of seborrhœa, and the only ones which are to be found in the great bulk of the patients who present any symptoms of the disease.

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[*] Charcot.—'Leçons sur les Maladies du Système Nerveux, vol. iii.

Putnam.—*Boston Medical and Surgical Journal*, September 1883, p. 217.

Walton.—*Archives of Medicine*, August 1883.

Page.—'Injuries of the Spine and Spinal Cord.' London, 1883.

Knapp.—*Boston Medical and Surgical Journal*, November 1888. (Reprint.)

Krafft-Ebing.—'Lehrbuch der Psychiatrie,' Stuttgart, 1888, p. 184.

Hartmann.—*Archiv für Psych. und Nervenkr.*, 1884, p. 98.

Another and very different form of the affection is that described by American writers as seborrhœa corporis. It is most frequently met with over the sternum and between the shoulders. It consists in an outbreak of papular, nummular, or circinate patches, or gyrate lines made up of a connected series of fragments of circles (Unna), more or less covered with dull-coloured, greasy scales. The colour is usually of the salmon tinge, but if the scales are removed, the surface of a freshly growing patch, which is always raised, is seen to be of a bright active red colour. The affection may spread rapidly, new spots springing up all over the body, and quickly enlarging and agglomerating; or it may remain in solid patches; or the patches may at once begin to fade in the centre, and to grow in a circinate form. It is generally accompanied by itching, often to a very annoying extent.

Unna noticed that the affection spread downward from the scalp, and my observations fully bear out this statement.

Evidence in favour of lesions being of seborrhœic origin are:—*a.* That they are invariably accompanied by a condition of seborrhœa of the head (Fox, Liveing, Unna). *b.* That they are often seen to be growing from, and directly continuous, with seborrhœic foci on the head. *c.* And that they present the same greasy conditions on this surface which are found in the ordinary seborrhœic states.

The relation of seborrhœa to eczema.—The *old* theory was that eczema was a secondary development due to the irritation of the sebaceous secretion.

Unna's view, however, differs entirely from that of his predecessors, in that he regards the whole of the symptoms which have been above briefly detailed as constituting in themselves a form of eczema, to which he has given the name of eczema seborrhœicum.

Brooke, however, states that the existence of typical eczema in connection with seborrhœa is now of course recognised by every observer, and I personally go so far as to agree with Unna that seborrhœic eczema in this sense is perhaps the commonest form in which eczema occurs; but to extend the use of the word to the non-inflammatory desquamations of the scalp and superficial furfuraceous patches on the one hand, and to the psoriatiform rings and gyri of *seborrhœa corporis* on the other, seems a most undesirable extension of our definition of eczema. The great mass of those who suffer from seborrhœa exhibit no infiltration even after the disease has existed for years; nor do they present anything more acute than a local hyperæmia, mostly of a transitory character. Papules form, which begin at once to be covered with scales, and may persist and enlarge by slow degrees without any attempt at vesicating. The excretion of fat and epidermis may be very marked and very rapid, and yet be accompanied by but little visible dermatitis; and the dermatitis, even when well marked, may be totally free from papulation, vesication, and even itching. In other cases a very slight amount of seborrhœa may be associated with a rapid and general outbreak of acute eczema, which is quite disproportionate to it both in extent and intensity.

The relation to syphilis.—Unna has shown that seborrhœic eruption frequently leads the way, and determines the site of syphilitic exanthemata; and that the seborrhœic states, which had been supposed to follow the syphilides, are really its predecessors.

The relation to psoriasis.—All writers have remarked on the difficulty which may present itself of distinguishing some cases of psoriasis from seborrhœa corporis. The task of making a diagnosis is still further increased by the fact that there are a number of cases, cases which are far from being uncommon, in which typical lesions of both psoriasis and seborrhœa coexist. The sites in which the greatest difficulty occurs are the limbs, more especially the elbows and forearms, and the knees and lower legs in these localities; firm, brightly scaled papules and patches are found, and amongst them, or within short distances, may be seen the rosy papules with the softer greasy scales of seborrhœa. Both eruptions are prone to leave pigmented patches when they disappear, but the seborrhœic are generally of a deeper hue than those of psoriasis; in both, the lesions are apt to recur, particularly on the edges of pre-existing patches, and both are prone to recur periodically, usually in the spring.

The relation to rosacea is very marked, and observation of a large number of cases of rosacea has shown me that seborrhœa of the scalp and of the face is present in nearly every case, and it is certain that the simple removal of the seborrhœa by purely local means will go far, not only towards removing the desquamation and pustulation, but also to allaying the active flushing and chronic hyperæmia.

MORGAN DOCKRELL, M.A., M.D.

ARTICLE 2085.

VAN PUTEREN ON THE PREPARATION OF SOLID CULTURE MEDIA FROM MILK.

DR. VAN PUTEREN, working in the laboratory of the Foundling Hospital at St. Petersburg, on the micro-organisms occurring in the alimentary canal of infants, was desirous of finding a solid culture medium, generally available and more quickly prepared than those he had hitherto employed. Drs. Tarchan-Mouravoff and Kolessnikoff had suggested the white of egg, and Miss Raskin, M.D., had prepared one from milk. In milk we have one of the very best culture fluids, but its opacity is an objection hitherto insuperable, for filtration through porous cylinders deprives it of some constituents, while the rennet employed by Heydenreich in his experiments in 1885 prevents the solidification of the gelatin.

By substituting a rennet essence free from pepsin Dr. Van Puteren at length succeeded in obtaining a perfectly transparent milk gelatin in less than two hours. His procedure is as follows: To one litre of skimmed milk in a tin saucepan of 1½ litre capacity he adds 5 or 6 cubic centimètres of rennet essence and warms it over a Bunsen burner to

40° or 42° C. When the temperature has reached 36° C. coagulation begins, the fluid becoming yellowish and transparent. After three to five minutes, the coagulum having shrunk, the liquid is passed through eight folds of (Marly) filtering paper. The filtrate is now reduced to 860 or 880 cubic centimètres and returned to the pan, the whites of two eggs and dry gelatin in the proportion of 6–10 per cent. being added. After the gelatin has been completely dissolved by stirring, the mixture is heated to boiling, when the egg albumen, previously slimy, coagulates, carrying with it a thick precipitate to the bottom. This takes place after four or five minutes. The contents of the vessel are again filtered as before, about 2 per cent. of sodic albuminate added, and then a weak solution of caustic potash to neutralisation. The fluid is once more filtered through cotton-wool in a glass funnel, the cotton having been moistened with warm water (it should flow from the funnel in a small but continuous stream); and the loss from evaporation is made up by the addition of about 100 cubic centimètres of distilled water.

The filtrate sets firmly on cooling, remaining clear and suitable for most purposes; but, should perfect crystalline transparency be required, it is simply necessary to repeat the filtration in a vacuum chamber and finally through paper in a Plantamour's hot funnel.

A few practical points must be borne in mind to ensure success; thus, much time will be gained by constant stirring during the coagulation of the casein, and while the gelatin is being boiled its burning may be avoided in the same way. The egg albumen must not be added until the liquid has cooled, or it will coagulate before it has been uniformly diffused. The boiling must be suspended so soon as the egg albumen begins to form firm clots, but filtration must not be attempted so long as any remains in a glairy condition, in which it would choke the pores of the filter.

Another solid culture medium is prepared from milk, sodic albuminate, and agar-agar in like manner, except that the agar-agar is added in the proportion of one per cent. at the same time as the white of egg, and the mixture boiled for seven to ten minutes, by which time the agar-agar is completely dissolved, but the coagulation of the egg albumen demands a further four to five minutes' boiling. When the process is completed and the mixture has set, a cloudy precipitate will be seen at the bottom of the mass, which must be cut off and thrown away.

Tin vessels are preferable to glass, and a Bunsen argand of fifty jets to a single flame, since glass vessels require a longer time; and too high a temperature, or one under 100° C. too long maintained, causes the milk sugar in the presence of the alkali to assume a brownish hue.

For a vacuum chamber Heydenreich has devised a simple and inexpensive apparatus, consisting of two bottles of a quarter of an eimer capacity [3 to 4 gallons, according as the German or Swedish eimer is meant.—*Rep.*], one of which stands on the table or floor, and the other is suspended from the ceiling by a pulley. Each is fitted with an India-rubber cork, perforated by two glass tubes bent at right angles, the leg of one being quite short and that of the other reaching nearly to the bottom of the bottle. To each of the longer glass tubes is attached a piece of stout India-rubber tubing, in length equal to the height of the room; these are furnished with clamps and carried along the wall. The short tube of the lower vessel is left open, while that of the upper is connected by similar rubber tubing with the neck of the bottle in which the process of filtration is conducted. Both bottles having been filled with water, the air in the lower is withdrawn by aspiration through the shorter tube, and a syphon action is set up, exhausting the air in the filtering chamber or vessel. When the upper bottle becomes emptied of water it is let down by the pulley, the tubing connecting it with the filter chamber is detached and transferred to the short tube of the lower bottle, which is then hoisted to the ceiling, and the operation of changing the position of the bottles is repeated until the desired rarefaction of the air is obtained.

For further detailed directions for the arrangement and construction of the filters we must refer our readers to the German abstract in the *Centralblatt für Bakteriologie*, vol. v.

E. F. WILLOUGHBY, M.D.

ARTICLE 2086.

CURTZE ON THE TREATMENT OF ACTINOMYCOSIS.

THE prognosis of this disease is very difficult. Many cases have been reported in which there appears to have been complete recovery. Ponfick distinguishes between internal and external actinomycosis, and Curtze (*Deutsche medizinal Zeitung*, No. 52, 1889) agrees with him when he says that as long as the process is confined to the subcutaneous tissue the disease is but local, though there may be a very large tumour. Yet it has often occurred that a tumour has been erroneously considered local. Thus Majocchi reports a case in which a girl had merely a slightly conical swelling, resembling a boil, behind the right ear. Death ensued in six days with high fever. The *post-mortem* disclosed a process of actinomycosis through the whole body. Such an experience renders prognosis very doubtful. On the other hand, there have been reported recoveries from severe actinomycosis in the abdomen. Curtze, in answering the question, How best to attack this enemy? says, First find the clinico-medical means to prevent the spread of the disease in the body; then try to prevent the entrance of the fungus into the organs. The method in which the fungus spreads through the different parts of the body gives us indications how to watch its destructive course. Nearly exclusively by surgical operations is it possible to meet it. Actinomycosis of the lungs is difficult of treatment. As the disease-centre is generally deeply buried in the tissue, and can be diagnosed only long after its commencement, successful treatment can be only very rare. In some cases resection of a portion of the lung might be justifiable. Less hopeless is the treatment of abdominal actinomycosis, when the disease is apparent on the surface. Here the sharp spoon works wonders, and the skilful surgeon will find the knife and lunar caustic of great value, although the dreadful condition of the intestine and other organs might well cause the most practised hand to drop the knife in despair.

There is no doubt that the disease has been acquired by human subjects from diseased beasts.

Baracz, of Lemberg, alone maintains that it is transferable from man to man, if only in the way of kissing. In cattle the disease appears endemically, in fact only in particular pastures. It seems that cattle fed on oats grown on newly-ploughed land were attacked by the disease. It is at any rate certain that the fungus occurs freely on plants, and veterinary surgeons believe that infection takes place through the mouth being cut by the sharp fodder. Thus Piana saw a cow with little knots of actinomycetes in the tip of the tongue, along with panicles of oats and other grain. Soltmann proves that man can also be infected directly from plants, for the barbs of oats were found to be centres of the infection in the œsophagus. It is by no means probable that the eating of meat causes the infection, for as the fungus is at once destroyed by contact with water it is not likely that it could leave the kitchen with any power to do mischief. Bollinger accuses milk of being the means of spreading the disease. The most important discovery is that of Israel and Partsch, who found nearly pure cultivations of the fungus in carious teeth. Thence it either enters the tissue of the jaw directly, or spreads through slight erosions of the mucous membrane or through the exposed pulpa of carious teeth. In this connection a case of Israel's is highly interesting, in which a fragment of tooth greater than a pea was found in lung extensively attacked by actinomycosis. In abdominal actinomycosis it is certain that in many cases the germ of the disease is introduced with the food. It is doubtful, however, whether Zehmann is correct in asserting that the fungus can enter the uterus and tubes through the vagina. At any rate Bollinger maintains that the size of the actinomycetes is too large to pass the placentary septum.

It is not yet known in what form the fungus appears in the oat plant.

Under these circumstances but little can be said concerning prophylactic measures. It is very desirable to keep the teeth and mouth cavity scrupulously clean, and to be careful with regard to diet. Much more remains to be ascertained concerning the fungus. John Elliott.

Article 2087.

DAVIS ON THE TREATMENT OF GASTRO-INTESTINAL CATARRH IN INFANTS BY IRRIGATION, &c.*

The writer begins by referring to the researches of Baginsky and Leo, who showed that the lactic fermentation is normally present in infants, and that it is not this process, but a further acid fermentation (resulting in the change of the neutral lactates to butyric acid, with the formation of acetic acid and acetone), which is pathological. The digestion of starch, casein, and albumen is checked simultaneously with the formation of these compounds.

The active cause of gastro-intestinal catarrh is most often irritating food; the predisposing causes are those which favour vaso-motor paralysis and blood-stasis in the digestive organs, as exposure to cold and the depressing effect of heat on the vaso-motor centres. Heat is therefore both an active and a predisposing cause; for when the average temperature for twenty-four hours is so high as to favour the decomposition of the albuminoid envelope of the fat-drop which forms the milk globule, milk becomes an active irritant.

The prophylactic treatment consists in flannel clothing, frequent tepid baths, sterilisation of the milk, heating of albuminous foods, and filtration and boiling of the water. The active treatment consists in the withdrawal of food for several hours, a warm bath, and a free supply of boiled water in small quantities as a beverage; should prostration threaten, whisky-and-water or sal volatile must be given. The loss of fluid is felt severely by infants, and a few liquid stools in a young child cause distinct depression. Should vomiting of curdled milk occur with pronounced gastric irritation, the stomach may be washed out with advantage. For this purpose a soft No. 8 catheter, connected by glass tubing with a long India-rubber pipe provided with a funnel, will answer very well. Boiled water, containing a little carbonate or salicylate of sodium, should be employed. The fluid should be poured into the funnel very gently, and allowed to return by siphonage until it is clear.

Should the case go on to enteritis, an intestinal antiseptic is indicated, and for the early stage calomel seems the best suited. It should be given in doses $\frac{1}{10}$ to $\frac{1}{20}$ grain every hour until the stools show a free secretion of bile. Diluted stimulants, with or without the incorporation of white of egg, should replace all food for the next six or eight hours. If the calomel prove insufficient, intestinal irrigation must be undertaken *before* prostration supervenes. To effect this, the child is laid across the lap of a nurse, belly downwards, the nurse being protected by a mackintosh apron, one end of which is gathered below into a pail; a well-oiled No. 11 gum elastic catheter is then introduced with a rotatory movement for six or eight inches. The catheter is connected by tubing with a fountain syringe, and from 20 to 50 ounces of warm antiseptic solution are injected. The fluid used may be thymol, 1 to 1,000, or sodium salicylate, 20 grains to the 20 ounces. Or boiled water, made alkaline with sodium bicarbonate, may be used. The injection may be repeated as often as twice daily. The treatment must be followed by very careful attention to the dietary. Ralph W. Leftwich, M.D.

Article 2088.

GOLGI ON THE DEVELOPMENT OF THE MALARIAL PARASITES IN TERTIAN FEVER.

Dr. Golgi, in *Fortschritte der Medizin*, 1889, page 81, begins by asserting that similarly as in quartan fever, so in tertian fever the origin of the disease is an amœboid organism which enters the red blood-corpuscles, and then goes through certain stages of development, which, in regard to succession one upon another, and in regard to symptoms, appear with unchangeable regularity. As soon as the infection has taken place, and the typical clinical forms of tertian fever have developed, there is always positive proof forthcoming of a characteristic condition, whether before or during or after the fever attacks. With numerous preparations and drawings Golgi describes the various phases of development, and the different species of parasites in simple tertian fever. He also explains the observations he has made in clinical cases of mixed fevers. Thus, in the blood of a patient with treble quartan fever there were three distinct generations of parasites, which came to maturity always one after another, day by day. The examination of the blood was confirmed by the regular succession of a violent, a medium, and a very slight attack.

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* *The Medical News*, No. 860 (Philadelphia).

As to their biological properties the parasites of the tertian fever are thus distinguished from those of the quartan fever :—

1. By the completion of their development-cycle in two instead of three days, as in quartan fever.

2. By the different character of the amœboid movements, which are more active in tertian fever.

3. By the relation of the parasite to the red blood-corpuscle that harbours it. While in quartan fever the substance of the attacked blood-corpuscle maintains its characteristic yellowish-green colour until the last phase of distinction, the action of the parasite of the tertian fever on the other hand is very early discerned, the blood-corpuscles losing their colour, even when the parasites occupy as yet but a small portion of them. This rapid decoloration appears to be connected with the rapidity with which the parasite sends out its protoplasmic shoots into all parts of the blood-corpuscle—even to its periphery.

In respect of their morphological properties, too, the two kinds of parasites differ. 1. The protoplasm of the quartan fever parasite has a much finer and more tender appearance. This is chiefly observable in the early phases of development of each kind. 2. In quartan fever the pigment appears in form of thicker grains and bacilli, which in tertian fever are of extreme delicacy. 3. The process of separation differs in an extraordinary degree in the two kinds of parasites. (This is shown by drawings in the original article.) According to Golgi's views the numerous varieties of intermittent malarial fevers are simply varieties or combinations of the two chief types—the tertian and quartan fever.

John Elliott.

Article 2089.

MINOT ON THE HISTOLOGY OF THE HUMAN ENDOMETRIUM AND FŒTAL MEMBRANES.

A monograph of considerable importance has recently appeared in an American scientific serial.* It is entitled 'Uterus and Embryo : 1. Rabbit ; 2, Man,' and its author is Dr. Charles-Sedgwick Minot, of Harvard Medical School. The following paragraphs include the author's summary of the conclusions at which he had arrived after a study of preparations made from the human uterus and fœtus.

The umbilical cord, according to Dr. Minot, is not covered by the amnion, but by an extension of the fœtal epidermis. Its cœlomatic cavity is completely obliterated during the third month, and a little later the pedicle of the yolk-sac is absorbed. The allantoic epithelium persists as a tube or cord of cells for a long period. The blood-vessels have specialised walls derived from the surrounding mesoderm, but are devoid of a true adventitia. The amnion is covered by a single layer of ectodermal cells which are connected by conspicuous intercellular bridges. It has no true stomata. Its mesoderm consists of anastomosing cells with a dense matrix. The chorion consists of two layers, mesoderm and ectoderm, both of which are present over all parts of the chorion throughout the entire period of pregnancy. Dr. Minot describes the minute structure of these layers with great precision.

Of more general interest than the above histological discoveries are the author's observations on the endometrium and its relation to menstruation and pregnancy. The menstruating uterus, says Dr. Minot, is characterised by hyperæmia, by hyperplasia of the connective tissue of the mucosa, and by hypertrophy of the uterine glands. The upper fourth of the mucosa is loosened and breaks off. Then comes the important assertion that there are no decidual cells. The author takes care to notify (*loc. cit.*, p. 416) that he once believed in the presence of decidual cells and in an increase in the number of leucocytes in the endometrium during menstruation. Since, however, his own observations have failed to confirm these statements he can no longer accept them. The proliferated connective-tissue cells are probably those which become decidual cells when the menstrual decidua is changed into the decidua of pregnancy ; a process which Dr. Minot has observed. [This subject is of some importance in relation to membranous dysmenorrhœa and the recognition of the decidua in early pregnancy.—*Rep.*]

The human uterus one month pregnant has lost its epithelium from its surface and from the ducts of its glands. Owing to the dilatation and contortion of the deep parts of the glands, it is divided into a lower cavernous, or spongy layer, and an upper compact layer. The connective tissue of the upper layer is transformed into decidual cells. The uterus seven months pregnant is without epithelium either on its surface or in the glands, except over a few isolated patches in the deep parts of the glands. There is no trace of the decidua reflexa. The decidua vera and serotina is described with great care. The decidual cells arise by direct enlargement of the connective tissue-cells of the mucosa. All parts of the decidua and placenta arise in place by metamorphosis of the tissue. The mucosa is preserved and there is no production of placental tissues by new formation.

Dr. Minot has come to the conclusion that the changes of the uterus during menstruation and gestation are homologous, the menstrual cycle being prolonged and modified by pregnancy. Hence it is that conception takes place only at the menstrual period, for the ovum can only modify the menstrual change. It has not the power, according to Dr. Minot, of setting up the development of a decidua. No satisfactory explanation of the origin of the amnion has yet been offered. The placenta is an organ of the chorion ; its evolution cannot be traced to modifications of either the allantois or the yolk-sac. The allantois is originally the intestinal canal of the *Bauchstiel* which serves as the means of vascular communication between the chorion and embryo. The enlargement of the allantois is secondary. We possess no positive information as to how the placenta performs its nutritive functions.

The section of Dr. Minot's monograph which is devoted to the human uterus is illustrated by some good woodcuts. The first part, which relates to the rabbit, and which want of space prevents us from noticing even in the briefest manner, is adorned by a fine series of plates. The monograph is furnished with a useful list of works relating to the endometrium, decidua, and fœtal membranes.

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* *Journal of Morphology* (Boston, Ginn & Co.), vol. ii., April 1889, No. 3.

ALBAN DORAN.

ARTICLE 2090.

CATRIN ON NATURAL SOMNAMBULISM.*

DR. CATRIN remarks that while we have a large number of observations on hypnotism, which is nothing else than somnambulism artificially produced, we have very few on natural somnambulism. The reason no doubt is that the latter affection is rare, and occurs at times when scientific observers are rarely present. Casual observers sometimes exaggerate or distort the symptoms which strike them, in order to increase the wonder of listeners. It has been stated that natural somnambulism is a form of hysteria. On this question Dr. Catrin observes that the pharyngeal anæsthesia which has been treated as a symptom of hysteria is commoner with healthy individuals than some writers would admit. To settle this point, he examined sixty sappers, all men in good health, of different ages, and from various parts of France. He found that in only two of these, nausea was produced by pushing the finger or a feather into the pharynx. In seven of the sappers, the epiglottis could be touched without provoking any reflex. It is another question whether complete anæsthesia of the pharynx is a symptom of hysteria. Whether the patient feels contact or not depends absolutely on his own assertion. Dr. Catrin holds that simulation in hysteria is very common. In fact, to deceive and simulate is part of the hysterical affection.

Dr. Catrin's patient had no hysteria. He, X., came of a healthy family, and had none of the stigmata of a neurosis about him. He was a soldier of twenty-two years of age. When eighteen he was said to have had attacks of somnambulism, which lasted for three months and then ceased. A year afterwards there was some uneasiness, followed by fits of somnambulism, which lasted during a month and a half. Then about two months and a half before the time that Dr. Catrin writes, he had headache and then attacks of somnambulism, on which he was sent to the hospital.

As a general rule, attacks of real somnambulism appear early in the night. Scarcely had the patient lain down for fifteen or twenty minutes, when he suddenly got up and wandered about the stairs and corridors. In spite of the incontinence of urine and the characteristic attitude assumed by the patient, on which Percy and Boisseau place so much importance, he had the furtive look of simulators. When a question perplexed him he smiled to conceal his embarrassment in a manner too silly to be real. The affection which he concealed with such care before being in the army, he now readily exhibited. On the night of March 24, it was proved that the attack began a little after the patient appeared to fall asleep. In regarding the case as one of simulation, it was thought that the simulator, being afraid of really falling asleep, hurried to give his performance. He went to bed at 7.30 and at 7.45 he suddenly got up. He had his eyes closed, and it could be seen that the lids were contracted by the effort. He went in a hesitating manner towards the door of the room, but at the first attempt he struck himself violently against a bed and a box placed about sixteen feet from the door. By feeling the wall he succeeded in getting out on to the landing of the staircase. A handkerchief was then shaken before him, and each time it passed his eyes a movement of the eyelids could be detected. On the stair X. guided himself by the walls, and on passing into a corridor he was awakened by being touched lightly on the back. After having looked at Dr. Catrin he went up to his room without hesitation, and without showing any of the fear or surprise so frequently seen in somnambulists suddenly wakened, which makes it so dangerous to rouse a patient when in a perilous position. Thus X. was a somnambulist with his eyes closed, which is extremely rare. An ignorant simulator would imagine that going about in his sleep without seeing would more astonish the witnesses. In the second place X. never had either the sureness of movement of somnambulists, noticed by all observers, or the dexterity with which during their pathological sleep they perform difficult exercises, which when awake they dare not even attempt. In the next place the sight was not paralysed, as is usually the case, and although X. struck himself violently against the walls and pillars without wakening, a light blow from the hand suddenly brought him out of his sleep. X. went to bed with his drawers and thick woollen socks on, which made his nocturnal excursions less unpleasant. On these garments being removed, his attacks of somnambulism became much shorter. These observations, however, were not sufficient to convict the patient, or to prevent him persisting in his bad habit, or lead him gradually to recognise his fraud.

On the morning of the 21st Dr. Catrin remarked before X. that bromide of potassium was not sufficient to cure his disease, and that by means of a new medicine the attack could be kept back at night by forty-five minutes. Some inert pills were ordered to be given him. He went to bed at 7.15 P.M. and did not rise until 8·10. It might be urged that X. acted under suggestion; but on the other hand he did not observe the mathematical exactitude of persons under that influence. He seems to have wished to delay his attack, but did not succeed in waiting the right time. The attack was similar to that of the 20th, but he was not awakened, and after a short walk awoke himself, rubbing his eyes, and without any external shock or blow to cause the awakening. On the 23rd Dr. Catrin ordered that the patient should not be permitted to go to bed until 8 o'clock. The medical officer on duty warned X. that if he lay down he had something in store for him. X. did not lie down. He said that he had resisted sleep all night—proof of a strong will seldom found in nervous cases. On the 24th the doctor ordered X. not to be allowed to go to bed till 8.45 P.M. The attack of somnambulism came on at 9.15 P.M. X. went and sat down on a bench in the corridor and then wakened himself scarcely five minutes after. On the 19th X. had, during an attack of sleep-walking, gone into the courtyard and jumped over a small stream. The medical officer on duty remarked in a loud voice that he was surprised at this. On his way back X. walked right into the water. These proofs being deemed conclusive, on the 26th interrupted electrical currents were applied to X.'s calves, who, at the first shock, promised to have no more attacks of somnambulism. He was kept under observation in the hospital for twelve days, and slept well. He was then discharged, and warned that though he could be punished for his deceit, nothing would be done if his future conduct were good.

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* *Lyon Médical*, Juillet 28, 1889.

W. W. Ireland, M.D.

Article 2091.

HOLT ON THE CLINICAL HISTORY OF ARSENICAL POISONING, AND DRAPER ON THE ANATOMICAL APPEARANCES RESULTING FROM POISONING BY ARSENIC.[*]

These papers were read at a meeting of the Massachusetts Medico-Legal Society and may therefore appropriately be considered together. Dr. Holt tells us that arsenic is by far the best known of all poisons, and speaks of the almost daily occurrence of cases of arsenical poisoning, both suicidal and homicidal. He says it is in exceedingly common use for both these purposes, and that the number of such cases seems to be on the increase. The first symptom would be a feeling of faintness or weakness coming on in about half an hour; vomiting is rarely absent and usually occurs in from one-half to two hours after the ingestion of the poison; it is violent and incessant, and, after the food that may have been present has been expelled, consists of a watery secretion mixed with glairy mucus, bile, and sometimes streaks of blood; this vomiting is almost sure to occur whenever anything is taken into the stomach; it is accompanied by a severe and pretty constant retching and a burning pain in the region of the stomach and lower part of the chest; the pain continues to the end; dryness of the throat and mouth and thirst are always prominent symptoms. Tenderness in the region of the stomach is a valuable and almost characteristic symptom. Diarrhœa usually sets in within three hours, the stools are at first yellowish and loose, afterwards watery and bloody, often with tenesmus. After five or six hours the skin is cold and clammy, the face pinched, and the patient may die from collapse in from five to ten hours after taking the poison; cramps in the legs are common towards the termination. Where death does not occur so speedily febrile symptoms are apt to appear; there is marked emaciation and the patient dies delirious. It is evident that Dr. Holt's description is intended to refer to the administration of a single large dose and not of repeated moderate doses. Premising that Dr. Draper has studied the same class of cases, the following account of the state of the stomach will be found of great interest: The stomach is the one organ which before all others possesses in the eyes of most medico-legal observers a paramount importance. It receives the poison immediately upon its ingestion, offers its extensive expanse of mucous membrane to the local action of the irritant, engages actively both in assimilating and in rejecting the unwelcome guest, and takes in as well a variety of agents designed to expel or neutralise the toxic material. It is not strange therefore that the *post-mortem* appearances presented by this organ after a fatal dose of arsenic should have challenged the close attention of medico-legal pathologists. These appearances take a wide range in kind and degree. On the one hand, it is not a very rare occurrence to find a stomach which has suffered no damage whatever by receiving a fatal dose of arsenic; so far as its gross appearances are concerned, it shows a surprising immunity from the effects which are supposed to be typical, and studied by itself it would readily be pronounced normal. On the other hand, we find appearances indicating to the fullest degree the irritant action of the poison; general redness, either of a bright scarlet hue, or more often of a dull brownish shade, diffused and confluent in extensive patches of submucous ecchymoses, or arranged in parallel streaks which, on closer examination, are found to represent two series of minute hæmorrhagic dots. Between these two extremes, each of which has but relatively few examples to illustrate it, we find all degrees and varieties. A common observation is to find the mucosa thrown into long folds or rugæ by the contractions of the muscular coat of the stomach, and these rugæ are marked at their summits by dull brownish-red discolorations, or present numerous transverse red lines arranged so closely together as to give the effect of a continuous longitudinal streak. The part of the stomach most involved in the change is the pyloric end, and here the redness, indicating submucous extravasation, is generally diffused, giving the surface something like the appearance of red velvet. Occasionally one is fortunate in finding deposited on the mucous membrane unmistakable evidence of the cause of death in the form of thick, pasty, whitish-grey patches, which are firmly adherent; these are surrounded by a line of vivid crimson, and if the pultaceous mass is carefully scraped away, the underlying mucous coat will be found to display a similar intensity of inflammatory redness, but without the erosion characteristic of an ulceration. Examination of the pasty material with a good lens reveals the typical crystals of arsenious acid. Besides this, adventitious lodgment of the poison upon the gastric mucosa, one sometimes finds large areas of the surface covered over with a layer of thick tenacious mucus, giving a suggestion of diphtheritic exudation. There is, moreover, a swelling of the mucous membrane, demonstrated by the obliteration of the normal line of demarcation between the œsophageal mucosa and that of the stomach. The microscope detects in the gastric glands changes which correspond with those found in the heart and kidneys—viz., cloudy swelling of the cells lining the glands, followed at a later stage by their fatty degeneration. The changes found in the stomach as a result of arsenical poisoning are confined to the mucous coat, the muscular and serous coats escaping injury.

Article 2092.

HUMPHREYS ON THE NEW ANTIPYRETICS.

In the *Practitioner*, September 1889, p. 190, and in the *Philadelphia Ther. Gaz.*, July 1889, Dr. Humphreys, of Texas, contributes an extensive article on the uses and abuses of the new antipyretics. The author has not used antifebrin very much in Texas, on account of the malarial infection which is so common there, and which is prone to produce hæmoglobinuria.

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[*] 'The Clinical History of Arsenical Poisoning.' By A. F. Holt, M.D. (*Boston Medical Surgical Journal*, Aug. 1, 1889.) 'The Anatomical Appearances resulting from Poisoning by Arsenic.' By F. W. Draper. (*Ibid.*, Aug. 8 1889.)

Antifebrin is known to bring about decomposition of the colouring-matter of the blood, and therefore the long-continued use of this drug in malarial districts is not to be desired. There can be no doubt of the value of antifebrin as an antipyretic, and as a palliative in certain painful neuroses, but it is difficult to give it in any other form but pills or in capsules, though the author states that it is soluble in spirit of nitrous ether. Personally I have found that it takes nearly a drachm of the spirit to dissolve ten grains of antifebrin, and it is not wise to give patients such large doses of nitrous ether as frequently as one requires to give ten grains of antifebrin. Phenacetin is also a powerful antipyretic and antineuralgic drug, without seeming to possess any toxic action. Dr. Kobler summarises his experience of phenacetin as follows. It is a very efficacious antipyretic. It has no disagreeable or deleterious effects, such as cyanosis or collapse. It produces decided euphoria. It is best given in single doses of from 8 to 12 grains, at long intervals; the reduction of temperature after such a dose being from 3°·5 to 4°·5 F. Professor Rumpf states that phenacetin is to be recommended as an antineuralgic in 15-grain doses in all cases of vaso-motor neuroses, in locomotor ataxia against the lancinating pains, and in cases of chronic neuritis against neuralgia, in various cases of neuralgia to sooth the pain. Antipyrin has now been used extensively for six years, and has gained the universal confidence of the most distinguished physicians of the civilised world, but it is inadmissible in the following conditions:—In all cases of cardiac weakness; in diphtheria affections, in which there is evidence of myocarditic lesions; after exhaustive hæmorrhages; during menstruation and in dysmenorrhœa; in catarrhal pneumonia; and in lobar pneumonia where there is œdema of the lungs; in the later stages of tuberculosis; in all cases of great debility and exhaustion, and in the later stages of long-continued fevers.

Richard Neale, M.D.

SURGERY.

RECENT PAPERS.

2093. Durante.—Removal of the Cæcum. (*Gazz. degli Ospitali.*)

2094. D'Antona.—Splenectomy for Chronic Febrile Infection due to a Special Bacillus. (*Gazz. degli Ospitali.*)

2095. Postempski. — Reduction of Diaphragmatic Hernia and Suture of the Wound in the Diaphragm. (*Gazz. degli Ospitali.*)

2096. Silbernik, Dr. K. A.—On the Treatment of Large Chronic Ulcers of Leg by Autoplastics. (*Transactions of the Third General Meeting of Russian Medical Men at St Petersburg*, 1889, Nos. 2 and 8, pp. 40 and 267.)

2097. Arnozan, Lande, and Maurange, Drs.—On the Cure of Anthrax by Injections of Carbolic Acid. (*Rev. Gén. de Clin. et de Thérap.*)

2098. Richardson.—On Morphine-Vaseline as a Local Application in Cancer. (*Asclepiad*, May 1889, p. 147.)

2099. Cheyne.—On the Cure of Bunion by Operation. (*Illustrated Med. News.*)

2100. Morgan.—On Anæsthetics in Dentistry. (*Jour. of the British Dental Association.*)

Art. 2093. *Durante on Removal of the Cæcum.*—A woman, 52, had been ill for eight or ten years. Complained of pain, when the bowels acted, in the right iliac fossa. In this situation was a tumour, descending towards the pelvis, painless except during the passage of fæces. Cancer of the cæcum or surrounding parts was suspected. On operation, the tumour was found to be very adherent to the iliac fossa, with parietal peritoneum, and loops of small intestine glued to it; the hard surface was knotty and irregular. The adhesions were broken down with difficulty, and during resection another difficulty was to recognise which was small and which large intestine, since the normal dimension was reversed owing to the obstruction existing. The ends of the bowel were united with three layers of suture, and the external wound closed. The patient did well, and on the seventh day had an action of the bowels without pain; on the tenth she got up. The tumour proved to be syphilitic, with chronic indurative perityphlitis. The cure was rapid and permanent. The above case was read before the Surgical Society in Bologna. At the same meeting Professor Trombetta described a similar case of tumour of the cæcum and ascending colon, in which existed symptoms of stenosis. He extirpated the cæcum, ascending colon, and part of the small intestine, and made an artificial anus. The patient died from peritonitis, from rupture of the intestine and escape of fæces on the fourteenth day. This was a case of typhlitis and perityphlitis, with small disseminated abscesses. Bassini also reported a case. A girl, 22, for eight or ten months had increasing disturbances of the intestine and tumour of the right iliac region. An extraperitoneal exploratory laparotomy was performed; and the site of the tumour being determined, it was removed with 8 to 9 centimètres of the small intestine and colon. The intestine and the abdominal walls were sutured. The patient made a rapid recovery. The tumour was adenomatous.

2094. *D'Antona on Splenectomy for Chronic Febrile Infection due to a Special Bacillus.*—The history of this case was read before the sixth meeting of the Società Chirurgica Italiana, held at Bologna, 1889. A child of 2 years, in March 1887, was attacked by pleurisy of left side with exudation; a few weeks after by gastro-intestinal catarrh, with a temperature of 40° C. in the evening, and 38° in the morning, and swelling of the spleen. Sent into the country, he at first was worse, and the spleen continued to increase. On the 13th day the fever left him (crisis), and he became apyretic, but the spleen continued rapidly to increase. Liq. arsenicalis, quinine, and other antimalarials were given. Returning to the city the fever reappeared; the child, however, was able to run about and had a most voracious appetite. All the antithermic remedies tried were unable to allay the fever; the spleen still increased; thus matters continued to June 1888, fever continuous, sometimes intermittent (40° to 37°). At this date he was brought to D'Antona. The belly was swollen, not veined, great wasting, intellect good. Diagnosis of malarial infection could not be accepted, as the locality in which the child lived was quite free from malaria, and the disease had shown itself uninfluenced by antimalarial remedies. On Aug. 13 splenectomy was performed. The temperature on the same day fell to 37°·9, on the following days 38°·2, 38°·4. On the 5th day apyrexia. Gastric catarrh supervened, as he had had before, with a temperature of 40°·4, followed by a subfebrile condition. Then purulent otitis, with a temperature of 41°, again followed by a subfebrile state. After a short time bronchitis appeared, with a fresh rise of temperature for nine days, and at this period the liver was enlarged to the umbilicus. The child was now apparently well. Five months later, the father, a medical man, had two cases of cerebro-spinal meningitis; the child contracted the disease and died. The spleen removed weighed 1,500 grammes, while the child weighed 14·15 kilogrammes. Cultivations of the blood from the spleen were made on agar, broth, and serum. For the first week they appeared sterile, then a bacillus appeared, which must be considered the cause of the disease. It was like the typhoid bacillus; it increased with difficulty in agar, well in gelatine, but not on potato, thus differing from the typhoid bacillus. Repeated injections in animals had no effect. D'Antona has met with two similar cases; in one the fever lasted seven years (7–14). In these cases also malaria and syphilis must be excluded. He considers splenectomy indicated, as the pathogenic cause has its seat in the spleen, from whence from time to time it invades the organism. Putti also narrated a similar case.

2095. *Postempski on Reduction of Diaphragmatic Hernia and Suture of the Wound in the Diaphragm.* A patient was admitted to the Ospedale della Consolazione, Rome, who, four months before, had received a wound in the seventh left intercostal space. On lifting a weight he was suddenly seized with symptoms affecting the heart, lung, intestines; the heart was misplaced, and there was intestinal occlusion. The diagnosis of diaphragmatic hernia was easy and confirmed by *post-mortem*. The hernial loop had not contracted adhesions with the hole in the diaphragm, but was simply strangulated. This circumstance encouraged Postempski to attempt cure by operation. On the dead body and in rabbits he satisfied himself that it could be done with hopes of success. A case soon occurred. A young man was admitted with an omental hernia, who had received a penetrating wound in the eleventh intercostal space. The wound was slightly enlarged to 11 centimètres. Two perpendicular incisions were made, as for a thoraco-plastic operation, and by forcible dilatation sufficient space was obtained. The protruded part was liberated, the margins of the diaphragm approximated by forceps, and sutured; toilette of the pleural cavity; suture of the soft parts. The withdrawal of the hernial loop gave rise to grave pneumothorax. This, however, had all disappeared by the twelfth day, and on the eighteenth the patient was presented to the Academy of Medicine. G. D'Arcy Adams, M.D.

2096. *Silbernik on the Transplantation of Large Strips of Skin in Crural Ulcers.*—Dr. K. A. Silbernik, of Lebedin, describes (*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, 1889, Nos. 2 and 8, pp. 40 and 267) two cases of neglected crural ulcers, measuring each about 15 × 13 centimètres, in which he performed Maas's autoplastic operation after two methods. In one, a strip 19 centimètres in length and 13 in breadth, was transferred from the patient's other leg, while in another the ulcerated area, situated on the anterior portion of the leg, was covered with two large lateral flaps cut out from the adjacent parts. In both excellent results were obtained. Dr. Silbernik lays down the general proposition that in inveterate extensive crural ulcers, involving subjacent muscles, the transplantation of large strips of skin is the only rational and effective treatment, and often saves amputation of the limb. The author's views are shared by Dr. M. G. Steinberg, of Warsaw, Professor F. I. Sinitzyn, of Moscow, &c.

V. Idelson, M.D.

2097. *Arnozan, Lande, and Maurange on the Cure of Anthrax by Injections of Carbolic Acid.*—The authors recently published the notes of two severe cases of anthrax which were cured by subcutaneous injections of carbolic acid. Five grammes of a 1 in 10 solution of crystallised carbolic acid were injected in five points along the periphery of the inflamed area. The improvement in the local and general condition of the patients was very marked, so much so that within twenty-four hours their recovery could be confidently predicted. The authors call attention to the fact that, notwithstanding the large doses of the acid employed, the symptoms of intoxication were almost *nil*, the effect of the injections being at once to arouse the patients from the torpor in which they were plunged. Dr. Huchard is of opinion that it is best to make use of a 5 per cent. solution, if only on account of the intense pain to which the injection of a stronger solution invariably gives rise.

Alfred S. Gubb.

2098. *Richardson on Morphine-Vaseline as a Local Application in Cancer.*—In the *Asclepiad*, May 1889, p. 147, Dr. Richardson states that morphine combined with vaseline forms one of the best possible sedative applications in cases of external malignant disease in which there is ulcerative breach of surface with continuous pain. The author prescribes it in the proportion of four grains of morphine to an ounce of vaseline, with two drachms of chloroform. The chloroform acts as a sedative, and causes the morphine to be better distributed. Morphine-vaseline is most conveniently applied thinly spread over a piece of fine lint or soft linen. It is easily removable without injury to the surface upon which it is applied, and should be renewed twice in the course of twenty-four hours.

Art. 2099. *Cheyne on the Cure of Bunion by Operation.*—In the *Illustrated Medical News*, Mr. Watson Cheyne records a case illustrating a method of treating bunion by operation. A young woman, aged 24, was admitted under the author's care in April 1889 on account of her great toes being so much everted that she could no longer do her work as a servant. On April 20, after thoroughly disinfecting the feet, Mr. Cheyne made a longitudinal incision over the inner and dorsal surface of the metatarso-phalangeal joint in both feet, the soft parts being divided down to the bone. The periosteum on the inner side was then stripped away, and a vertical slice of the thickened bone was sawn off, a small portion of the articular surface being removed. A portion of the subcutaneous tissues on the inner side of the joint was removed, together with a portion of the elongated internal lateral ligament, and the toe was brought straight and pressed upwards. The wounds were stitched, antiseptic dressings applied, and two splints were fixed—one on the inner side to keep the toe inwards, and one beneath to keep it upwards. The wounds healed by first intention, and the dressings were left off on May 2. The feet were then put in silicate bandages, which were kept on for four weeks. On removal of the bandages the toes were found to retain their normal position, and in a few days she could walk without pain. To prevent recurrence, an apparatus was fitted to keep the toe in its place.

2100. *Morgan on Anæsthetics in Dentistry.*—In the *Journal of the British Dental Association*, Dr. Morgan contributes an able paper on the subject of anæsthetics in dentistry. With regard to general anæsthetics, the author, of course, considers nitrous oxide to be the best if the operation is likely to be a short one, but if stumps have to be dug out, or there are a number of teeth to extract, then chloroform or ether must be used. Quite recently, however, Dr. Hewitt, of the Dental Hospital, has shown that by the combination of 12½ per cent. of oxygen with nitrous oxide he can keep a patient unconscious longer than with the nitrous oxide alone, and they keep much quieter and with less signs of asphyxia. This will therefore be much used by dentists if it be found to act in the manner stated by Dr. Hewitt. The only local anæsthetic which is discussed is cocaine. This drug has failed to come up to its early expectation, and it is by no means safe. Its action on various constitutions is not alike; what is safe for one person is not for another, and there are various reasons against using it subcutaneously. It requires about three-quarters of a grain to produce any effect as a rule, and then it often fails to penetrate to the nerve of the tooth, and lastly the pricking with the hypodermic needle and the subsequent waiting is as bad for a nervous patient as having the tooth extracted without the drug. RICHARD NEALE, M.D.

MEDICINE.

RECENT PAPERS.

2101. COMERFORD.—On Ergot in Cholera. (*Indian Med. Jour.*)

2102. JONES.—A Case of Ileo-Colic Intussusception. (*Illustrated Med. News*, September 1889, p. 259.)

2103. KEVIN.—On Dyspepsia. (*Dublin Jour. of Med. Science.*)

2104. GERSTACKER.—On the Hygienic Importance of Re-vaccination. (*Deutsche Vierteljahrsschr. f. öffentl. Gesundheitspflege.*)

2105. LANCEREAUX, M.—On Tuberculosis in Alcoholic Subjects. (*Rev. Gén. de Clin. et de Thérap.*)

2106. RENAULT, DR.—On the Hygiene of Diabetic Patients. (*Rev. Gén. de Clin. et de Thérap.*) f

2107. MASCAREL, DR.—On the Injurious Effects o the Milk Diet in Diabetes. (*Bull. Gén. de Thérap.*)

2108. STACKLER, DR.—On the Comparative Results of Arm and Leg Vaccination. (*Bull. Gén. de Thérap.*)

2109. DUHAMEL, DR.—On a Case of Spontaneous Cure of Anasarca due to Alcoholic Cirrhosis. (*La Clinique*, Aug. 1, 1889.)

2110. PETRESCO, M.—On the Treatment of Pneumonia by large Doses of Digitalis. (*Bull. Méd.*, Aug. 28, 1889.)

2111. GAUCHER, M.—Some Recent Observations on the Treatment of Diphtheria. (*Tribune Med.*, Aug. 29, 1889.)

2112. WEST, DR. S.—On Plastic Bronchitis. (*Practitioner*, August 1889.)

2113. BIANCHI, A.—Antiseptic Treatment of Smallpox. (*Lo Sperimentale.*)

2114. MASSOLONGO.—Gastric Epilepsy. (*Lo Sperimentale.*)

ART. 2101. *Comerford on Ergot in Cholera.*—In the *Indian Med. Journal*, Surgeon-Major Comerford contributes some notes on the hypodermic injection of liquid extract of ergot in the first stage of cholera. At Allahabad the author tried the subcutaneous injection of liquid extract of ergot in 10-minim doses in the cases of two children, the diarrhœa being frequent and rice-water in appearance. In each case the diarrhœa was immediately checked; both children were at the time passing into the state of collapse, which proved to be mild; both made excellent recoveries. In other instances the author has tried this method of treating severe diarrhœa with marked success, and in the case of an old man who was sinking from excessive diarrhœa a few doses of liquid extract of ergot arrested it in a few hours. Professor Maclean states that if you can arrest the first stage of cholera you save the patient as a rule, and, seeing the success met with, it is very desirable that a further trial should be given to this treatment.

2102. *Jones on a Case of Ileo-Colic Intussusception.*—In the *Illustrated Medical News*, September 1889, p. 259, Mr. Jones records an interesting case of recurring invagination of the bowel where the fatal attack occurred seven months after the first. A child, aged 5 months, was noticed to be out of sorts and feverish on July 4, 1888. On July 5 she vomited some bile-coloured fluid. On July 6 the vomiting was persistent. On July 7 the author was sent for and found the child very restless, with a temperature of 102° F. The child had passed a normal motion in the morning, the abdomen seemed tender but was not distended, and no tumour could be felt. The vomiting, however, continued, and in the evening some blood and mucus passed by the rectum. Next day more blood and mucus passed, and a distinct tumour could be felt in the neighbourhood of the cæcum, and there were signs of commencing tympanites, with bilious vomiting. A diagnosis of intussusception was arrived at, and inflation with a pair of bellows was at once resorted to, under chloroform, but without success. The author next injected warm water, at the same time kneading the abdomen at the seat of obstruction; after using some force, the obstruction was removed, and a great deal of bloody mucus came away with the water. The child made a good recovery. Seven months later, on Feb. 17, 1889, the child seemed out of sorts and the author ordered some Dover's powder to be given freely, as examination of the abdomen gave negative results. Next morning some blood was passed, but no motion, and bilious vomiting had set in. A tumour as large as a sausage could be felt in the old site, so at 3 P.M. chloroform was given and hot water injected at the same time as kneading was applied over the cæcum. After about ten minutes this measure apparently succeeded; the child recovered from the anæsthetic and seemed quite lively. About 8 P.M. the mother unwisely allowed her to take the breast, and half an hour later vomiting set in, and at 10.30 P.M. the child died rather suddenly. On *post-mortem* examination the small intestine was distended with gas; colon empty; no adhesions; no fluid in peritoneal cavity; occupying the cæcal region was an example of true ileo-colic intussusception. The ileum had been protruded through the ileo-cæcal valve into the cæcum.

2103. *Kevin on Dyspepsia.*—In the *Dublin Journal of Medical Science*, Dr. Kevin contributes some valuable remarks on the various causes which produce dyspepsia. It is among those who live in a city that we find cases of dyspepsia, and a frequent cause is eating more than can be assimilated. Partaking of food when the mind is occupied by business, or reading, prevents the proper mastication that is necessary for digestion ; so many people think it important to masticate animal food well, but do not hesitate to bolt a piece of bread, which should of course be thoroughly masticated, as the mouth has everything to do with the proper digestion of farinaceous food. Tea boiled, tea too strong, and tea too frequent is responsible for a large portion of the dyspepsia met with among women. Worry and anxiety of mind is frequently an exciting cause ; it seems to stop the secretion of saliva and gastric juice. Imperfect teeth, unhealthy surroundings, want of variety in food, excessive use of fluids at meals, condiments, pickles, and sudden changes from hot to cold articles of diet, are all conducive to dyspepsia. In the treatment of this affection drugs can never hold a first place, but a careful regulation of the habits and dietetics of our patient must be the main factor in restoring healthy digestion. The following is a specimen of diet useful in many cases of weak digestion. *Breakfast.*—Some Scotch Midlothian oat-flour or revalenta to begin with, then toasted bacon, or a mutton chop, or white fish, and, if tea be allowed, only one cup. *Dinner.*—A clear soup, white fish, mutton chop, rice, stewed apples, vermicelli, or custard pudding. *Tea.*—Some more oat-flour, with a lightly boiled egg, or cold mutton, or cold chicken. Fluids should be sparingly used at meals, but much benefit is often derived from drinking water two or three hours after food, especially if acidity be felt. Constipation is nearly always present in cases of dyspepsia, and purgatives are bad. An enema of cold water, or glycerine, is to be preferred to anything else, but if patients will not adopt this means, then a teaspoonful of flowers of sulphur, or of compound liquorice powder, answers very well. The great advantage obtained by going to a good hydropathic establishment is generally due to the regular hours of exercise, food, and sleep, freedom from business cares, and careful dieting, and not so much from the bathing indulged in at such places. RICHARD NEALE, M.D.

2104. *Gerstacker on the Hygienic Importance of Re-vaccination.*—Dr. R. Gerstacker, in a reprint from the *Deutsche Vierteljahrsschr. f. öffentl. Gesundheitspflege*, confirms the statement that the protection afforded by vaccination is distinctly limited as to time; re-vaccination should be performed at regular intervals. The hygienic importance of this is not restricted to the individual, for the relative immunity of the general public is only assured by the protection possessed by each individual. This is abundantly proved in Germany by the almost total extinction of small-pox since the imposition of the re-vaccination law of 1874, which enforced the re-vaccination of all school children, and especially by the freedom of the German army from small-pox since the same law. Re-vaccination had been strictly enforced in the army for years before this law, which made no difference at all in the army regulations, and yet the army was suddenly and strikingly influenced by it. The average duration of the protection afforded by vaccination Dr. Gerstacker puts at about ten years; re-vaccination should therefore be repeated regularly, apart from the re-vaccination before leaving school (in Germany). Legal measures to this end are impracticable under ordinary circumstances, on account of the administrative difficulties, but the author does not hesitate to say that they are, sanitarily speaking, indispensable in times of small-pox epidemics.

E. J. EDWARDES, M.D.

2105. *Lancereaux on Tuberculosis in Alcoholic Subjects.*—The effect of alcohol on the organism in retarding metabolic changes and checking combustion diminishes the appetite and renders the tissues an easy prey to the attack of the tubercle-bacillus. Tuberculosis in alcoholic subjects always presents about the same features. It usually begins on the right apex behind, though, of course, this localisation is not altogether special to this form of the disease. Hæmoptysis is often an early symptom and tends to recur. In certain cases it is the first symptom to be met with in persons of apparently robust health, indicating the advent of the disease which is shortly to carry them off. The course of the disease is often very rapid, though intermissions are occasionally met with.

2106. *Renault on the Hygiene of Diabetic Patients.* In order to prevent irritative fermentation of the liquids, &c., in the mouth, the frequent use of antiseptic mouth-washes should be enjoined. Fatigue, exposure to climatic vicissitudes, should be avoided or guarded against, and long journeys should be forbidden. The cutaneous functions are markedly deranged in diabetes; perspiration is small in amount, and the deposit of sugar in the glands gives rise to intense general pruritus, leading to erythematous, papulous, or pustular eruptions, particularly in the neighbourhood of the genital organs. Tepid baths render great service by freeing the skin of the causes of the irritation, and tend to ward off untoward complications. The genitals should be frequently sponged with tepid water, and dusted with rice-powder or Fuller's earth. Great care is necessary to prevent even trivial traumatic lesions of the skin, which may have serious consequences. A careful attention to hygienic precautions will often postpone indefinitely the fatal coma which is usually the terminal stage of the disease.

2107. *Mascarel on the Injurious Effects of the Milk Diet in Diabetes.*—The first patient was a man, aged 48, who for a year past had been suffering from 'rheumatism' and herpes, associated with an intolerable thirst, to assuage which he had been advised to drink large quantities of raw milk (4 to 5 litres in the twenty-four hours). He was emaciated, and the tongue was coated. He complained of anorexia, constipation, and a dry, hot skin. The pulse was small—100. The secretion of urine was excessive, and the urine itself was clear and free from albumen. A few days later he was found dead in bed. At about the same date a young man of 27 was in the habit of drinking from 4 to 6 litres of milk daily to assuage his thirst. This patient had been examined and found to be suffering from diabetes. After three weeks of the exclusive and excessive use of milk he died suddenly with cerebral symptoms. Dr. Mascarel concludes that the only circumstance in which diabetics should be ordered milk is when the urine is found to contain albumen as well as sugar.

2108. *Stackler on the Comparative Results of Arm and Leg Vaccination.*—In 1888 Dr. Stackler had occasion to revaccinate a certain number of school children, and he divided his cases into two series, according as he vaccinated on the arm or the leg. He remarked that the percentage of successes on the leg was much greater than when the arm was selected as the site of the operation. This series comprised 273 cases. In June 1889 he repeated his observations in 177 cases with greater care, dividing the cases into three groups—(1) positive, (2) doubtful, and (3) *nil*. The subjects were 122 girls and fifty-five boys, whose ages varied from 6 to 14. In ninety-nine vaccination was performed on the left leg, and in seventy-eight on the left arm. The results were as shown in the following table:—

Revaccinations.	No. of re-vaccinations.	Positive results.	No. of pustules.	Doubtful results.	No. of pustules.	Failures.
Left leg	99	23	49	31	87	45
Left arm....................	78	11	32	25	41	42
Left leg, per 100	—	23·2	12·37	31·3	21·99	45·45
Left arm, ,, ...	—	14·1	10·25	32·0	13·14	53·84

2109. *Duhamel on a Case of Spontaneous Cure of Ascites and Anasarca due to Alcoholic Cirrhosis.*—In March 1886, a man, 57 years of age, was admitted into the Obernay Hospital with hypertrophy of the liver, ascites, and œdema of the lower extremities. He had for years been addicted to drinking large quantities of brandy. He was tapped in April, and thirteen to fourteen litres of clear yellow fluid withdrawn. The abdomen, however, quickly refilled, and the operation had to be repeated at intervals of three or four weeks. In February 1888 the general condition of the patient was about the same, and on the 2nd he was punctured for the fifty-third time. During the operation the patient asked whether it would hurt him to drink the fluid withdrawn, because it had occurred to him that he could effect a cure by drinking it. He was told that, though not hurtful, it was hardly appetising; but no sooner was the operation over than he swallowed about eight fluid ounces of the fluid without any inconvenience. The effusion did not recur, and the patient was enabled to leave the hospital in five or six weeks, perfectly convinced that the improvement was due to his own treatment. He has since been seen, and although the liver is still enlarged there is little or no effusion, and no sign of œdema. He earns his living by light work.

2110. *Petresco on the Treatment of Pneumonia by large Doses of Digitalis.*—Since 1883 the author has treated all cases of pneumonia by means of large doses of the infusion of digitalis (4 to 12 grammes of dried leaves to 200 grammes of water and 40 of syrup, a tablespoonful every half-hour). The results have been eminently satisfactory, the attack generally aborting by the second or third day, and the physical signs disappearing altogether at the end of the third. In certain cases twenty-four hours have sufficed to enable the patient to return to work. The tolerance and non-poisonous effects of the drug were proved by 755 observations.

2111. *Gaucher on Some Recent Observations on the Treatment of Diphtheria.*—The author regards diphtheria as primarily a local malady, the constitutional affection being only secondary. He consequently lays great stress upon the value of local antiseptic applications, and after numerous experiments has finally devised the following formula as best calculated to meet the circumstances:—℞ camphoræ, 20 parts; ol. ricini, 15 parts; spiritus rectif., 10 parts; acidi carbolici cryst., 5 parts; acidi tart., 1 part. This gives a clear and stable solution, always ready for use. He first removes the false membranes with cotton-wool wound on a stem, and then applies the above solution, repeating the operation every four hours. Carbolised irrigations (1 per cent.) should be used every two hours, and (in adults) frequent gargling. He claims to have treated 42 cases of diphtheria in this way, with only three deaths, and these three in cases recognised as fatal from the beginning.

ALFRED S. GUBB.

2112. *West on Plastic Bronchitis.*—In this paper Dr. Samuel West has continued the work commenced some years ago by Lebert, and has collected together all the recorded cases of plastic bronchitis which have occurred since the year 1869. Fifty-two cases have been reported during the twenty years, and the result of a critical examination of these is here given. The majority of the cases being of a recurrent type, no attempt has been made to follow Lebert in his classification of plastic bronchitis into acute and chronic groups. The only case seen by the author was that of an otherwise healthy woman of forty, who for the previous two years had been subject to regularly recurring attacks of extreme dyspnœa, followed by free expectoration in which casts were discovered. These were small, greyish white, and much ramified. The largest were not thicker than a goose quill, many being much smaller. The attacks came on at 2 A.M. and lasted from two to three hours. No special symptoms or physical signs were observed either during or between the attacks. No relief was afforded by treatment. Examination of the records of other cases showed a preponderance of cases amongst males, especially in early and middle life. Some of these were associated with other acute and chronic inflammatory conditions of lung or pleura, but no direct connection between them could be made out. The symptoms produced were, in the majority of cases, those of dyspnœa and cough, followed and relieved by free expectoration. The dyspnœa has rarely proved fatal. The physical signs are those of bronchial catarrh, unless some other affection of the lung be present. The sputum is muco-purulent, for the most part, and the casts are found intermingled with it. Neither the Charcot-Leyden crystals nor the spiral threads of Curschmann have been discovered in association with them. The casts were most frequently expectorated at night. Hæmoptysis has occurred in some cases, but has generally ceased with the evacuation of the casts. The course of the temperature varies with individual cases, sometimes rising with the formation of the casts and falling again after their expectoration. The access of the disease is generally very sudden, without premonitory symptoms. Each attack may last but a few hours, but there is a strong tendency to recurrence at varying intervals, extended in some recorded cases, to several years. The liability to the disease would seem to last through life. Of its etiology nothing certain is known. Treatment up to the present time has been singularly unsuccessful. Iodide of potassium, and lime-water inhalations have been the only drugs for which the least result has been claimed. Dr. West's paper concludes with a complete bibliography of the subject.

E. CLIFFORD BEALE, M.B.

2113. *Bianchi on Antiseptic Treatment of Small-pox.*—The system of treatment adopted by Dr. Bianchi consists (1) in rendering the surface of the body of the patient as far as possible aseptic, during the whole illness; (2) in maintaining the bed clothes aseptic; (3) in maintaining in like manner the walls of the room and the air circulating in it also aseptic. The first indication is fulfilled by the use of baths, washings, and inunctions. The baths are to be tepid, containing 5 per cent. of boric acid. The washings are to alternate with the baths, and when these cannot be managed, to take their place, the whole body is to be washed, using a clean sponge with a 1 per thousand solution of corrosive sublimate, how frequently depends on the severity of the case. No symptoms of absorption of the sublimate are ever seen if the washing is carried out quickly and the body dried. The boric acid solution (5 per 100) may also be used, especially in the initial and final periods. In mild cases, the whole body is to be washed once with the corrosive sublimate solution and twice with the boric acid solution in the twenty-four hours during the stage of eruption; during the stage of pustulation, twice with the sublimate and four times with the boric acid; during desiccation twice with the sublimate and one bath daily. In grave cases, during eruption, twice with the sublimate and twice with the boric acid solution; during pustulation three times with each; during desiccation twice with each and a bath. After washing, all parts covered with eruption are to be smeared with an ointment containing from 1·5 per cent. of iodoform. If pustules ripen from insufficient care in the antiseptic treatment, they should be opened with a needle, which has been heated in the spirit lamp and then dipped in the sublimate solution. The air of the room should be frequently changed by free ventilation, and the floor, walls and furniture washed with a 5 per cent. solution of corrosive sublimate. The cases treated in this manner amount to 96, 22 mild, 15 very severe, 39 severe. Conclusions: 1. This treatment is rational. 2. It diminishes the duration of the eruptive period, moderates the temperature, preventing hyperpyrexia, and complications. The patient convalesces promptly and is not scarred. 3. This treatment practically isolates the patient. 4. It prevents the development of suppuration, and hence other cutaneous and visceral complications. 5. It limits the contagion, and therefore is a good prophylactic measure.

2114. *Massolongo on Gastric Epilepsy.*—Massolongo gives the history of two patients in whom none of the customary antecedents existed, who suffered from epileptic attacks supervening after gastric disturbances, characterised by vomiting of food and obstinate constipation. After treatment of the dyspeptic symptoms, the patients completely recovered. Massolongo, after recalling the cases described by Pommay and by Lepine and Schultz, cannot accept the explanation of the first, that these epileptic attacks are due to irritation of the pneumogastric; nor can he accept the hypothesis of Lepine, who believes the epilepsy in his cases of dyscrasic origin. Like Pommay, he thinks the cause resides in the stomach, but the attacks are not due to peripheral irritation of the pneumogastric, but to the absorption of anomalous products of stomach decomposition, which in dyspeptics are elaborated in great quantity. We have to do, then, not with a reflex, but with a toxic epilepsy. The favourable results obtained by removing with antiseptics these anomalous products support this hypothesis of the pathogenesis of nervous phenomena so frequent in dyspeptics.

G. D'Arcy Adams, M.D.

THERAPEUTICS.

RECENT PAPERS.

2115. Otis.—On Creolin. (*Boston Med. and Surg. Jour.*)

2116. Bruce.—The Strathpeffer Waters. (*Practitioner.*)

2117. Richardson.—On Alcohol before Chloroformisation. (*Asclepiad*, August 1889, p. 239.)

2118. Croskey.—On Sodium Silico-Fluoride, *vel* Salufer. (*New York and Philadelphia Times and Register.*)

2119. Nobili, Dr. A.—On Guaiacol. (*Deutsche medizinal Zeitung*, No. 52, 1889.)

2120. Thompson, Gilman, M.D. (New York).—The Therapeutic Use of Oxygen Inhalation. (*Practitioner*, August 1889.)

2121. Cattani.—Exalgine (Methylacetanilide). (*Gazz. degli Ospitali*, July 24 and 28, 1889.)

2122. Lebowicz, Dr.—On the Therapeutical Uses of Creolin. (*Revue Gén. de Clin. et de Thérap.*, July 11, 1889.)

2123. Blanc, M. Emile.—On a Method of Administering Chloral Hydrate in Eclampsia. (*Lyon Médical*, June 1889.)

2124. Perret et Devic, MM.—On Antipyrin in the Treatment of Nocturnal Incontinence of Urine. (*Rev. Gén. de Thérap.*, July 1889.)

2125. Abet, Dr.—On the Diuretic Action of Chimaphila Umbellata. (*Bull. Gén. de Thérap.*)

2126. Huchard, Dr.—On Pyrodine. (*Rev. Gén. de Clin. et de Thérap.*)

2127. Vigier.—On Antipyrin and Salicylate of Soda.

2128. Baudoin.—On Salicylic Acid and Vaseline in Small-pox.

2129. Vigier.—On Mucilaginous Pomade.

Art. 2115. *Otis on Creolin.*—In the *Boston Medical and Surgical Journal*, Dr. Otis contributes an exhaustive paper on the value of creolin both surgically and medically. This subtance is prepared by Pearson & Co., of Hamburg, who give the following analysis: 66 per cent. of neutral hydrocarbonates, 27·4 per cent. phenols (without carbolic acid), 2·2 per cent. organic bases, 4·4 per cent. ash. It is claimed to be a non-poisonous germicide and antiseptic, one of the most powerful deodorants, to a certain extent a hæmostatic, and possessing qualities which diminish secretion and promote granulations; it exercises a most happy effect upon unhealthy and pus-secreting mucous membranes, and it is a non-irritant. For ordinary purposes of an antiseptic in operative surgery two solutions are needed: one of 2 per cent. for cleansing and disinfecting the hands, instruments, and portion of the body to be operated upon; the other of ½ per cent., for irrigating the wound, and to wet the gauze dressings if used. Where a powder is desired for dusting, the following formula is good: creolin, 3 parts; boracic acid, 100. Creolin in a solution is opaque, which is an objection to its use as an antiseptic fluid for instruments. For burns creolin oil acts exceedingly well, or as an ointment of 1 or 2 per cent. with vaseline or lanoline. Creolin has been applied to the mucous membranes in almost every part of the body. In the eye it is best used for trachoma and corneal ulcers. As a gargle, from ¼ to 1 per cent., it is excellent in diphtheria. Inhalations of creolin vapour in phthisis, of ½ to 2 per cent., reduce the expectoration and stop the odour. In obstetric and gynæcological practice creolin has been extensively used, and compares favourably with the use of bichloride of mercury in similar cases. In treating mucous membranes with creolin the best results are obtained in chronic cases. The author has used this drug internally in cases of phthisis, and dyspepsia due to fermentation; but it is very unpleasant to take, and can usually only be administered in capsules.

2116. *Bruce on the Strathpeffer Waters.*—In the *Practitioner*, Dr. Bruce contributes a short article on the value of the Strathpeffer waters. These are of both the sulphurous and chalybeate kinds, and are suitable for the following complaints:—Those suffering from chronic rheumatism and rheumatic gout in their varying forms, including sciatica; those suffering from skin diseases, more especially when connected with the gouty diathesis; dyspepsias and sluggish livers, particularly when caused by errors of diet; most cases of gravel in its different forms. Anæmia quickly disappears with the use of sulphurous waters, even where steel has failed. Some forms of uterine disorder improve greatly, such as amenorrhœa, catarrh, &c.; but, as a rule, metrorrhagia is a bar to the use of the waters. Patients labouring under disease of the kidneys, advanced heart-disease, phthisis in its second stage, and asthma, should on no account be sent to Strathpeffer. The best months for visitors are June, July, August, and September. The rainfall is slightly above the average of that of London, but the number of wet days is usually less. The surrounding scenery is beautiful, representing mountain, moor, loch, and woodland, in constantly changing relations. The climate is not vigorous, considering it is the farthest north of the most popular spas of this country. It is sheltered on the north, north-east, and north-west by the immediate proximity of Ben Wyvis. It stands well above the level of the sea, and is midway between the east and west coasts.

2117. *Richardson on Alcohol before Chloroformisation.*—In *The Asclepiad*, August 1889, p. 239, Dr. Richardson writes that he still adheres to an old suggestion of his, that it is good to administer a dose of alcohol by the mouth before proceeding to administer chloroform. In patients of strong and excitable temperament, a full dose of alcohol acts as a sedative, relaxing their arterial vessels, and thereby preventing the arterial tonicity and contraction which chloroform so commonly induces, and which leads to the tetanic stage of chloroform narcotism. Again, in patients with feeble heart, who are usually of nervous, hesitating mind, a previous dose of alcohol is of untold value in calming their fears and relieving the weak circulation, so that the chloroform acts rapidly and without producing toxic results. The author does not administer brandy, or whisky, or wine, but pure alcohol diluted with water. To an adult the dose may vary from four fluid drachms for an abstainer, to an ounce and a half for one accustomed to it as a daily beverage. The chloroform should not be given immediately the alcohol is swallowed, but it is necessary to wait until the first degree of alcoholic intoxication is produced—that is, until the vessels are injected with blood, the face is flushed, and the extremities are warm. The same rules apply to the administration of methylene bichloride and to all the anæsthetics in which chlorine forms a constituent part, for in the action of this series of chemical bodies it is the chlorine that gives the tetanic touch to the muscular fibre, voluntary and involuntary.

2118. *Croskey on Sodium Silico-Fluoride, vel Salufer.*—In the *New York and Philadelphia Times and Register*, Dr. Croskey contributes an excellent thesis on the value of sodium silico-fluoride as an antiseptic. This salt is not poisonous, and is a fine white powder, of slightly saline acid taste, perfectly inodorous; seven grains of the salt will dissolve in a fluid ounce of water. It is best obtained from the firm of Messrs. Rosengarten & Sons. The following are the conclusions arrived at by the author:—1. It is an efficient antiseptic. 2. A solution of one grain to an ounce of water is quite strong enough for ordinary purposes, and it is perfectly unirritating. 3. The solution is unirritating to the hands, which is no small advantage to the operator. 4. A solution of one grain to the ounce may safely be used to syringe out closed cavities, even where the operator cannot be certain of all the fluid returning. 5. It acts very efficiently as a deodoriser of the hands, when it is necessary to examine offensive growths or cavities, and a saturated solution is best to plunge the hands into when the operation is finished. 6. A very convenient and comfortable antiseptic poultice may be made by soaking gauze or absorbent wool in a hot solution (ten grains to the pint), and applied as a fomentation. This substance is known in England better under the term 'Salufer,' and in the *Brit. Med. Jour.*, May 1889, Dr. Mayo Robson writes, saying he has found it a safe and efficient antiseptic, and has used it with much benefit in the following class of cases. In washing out the peritoneal cavity after laparotomy, with a solution of ten grains to the pint; in strangulated hernia; in the radical cure of hernia; in excision of joints; in amputations; in washing out the pleural cavity in the removal of tumours; in excision of veins; in osteotomies; in washing out the bladder; as a vaginal douche; in the irrigation of extensive ulceration in the rectum; in washing out the stomach; as an injection in gonorrhœa; in syringing out large pelvic abscesses; as a gargle in sore-throat; as a nasal douche, and in many other cases. R. Neale, M.D.

2119. *Nobili on Guaiacol.*—The *Deutsche medizinal Zeitung* has the following abstract from a paper by Dr. A. Nobili in the *Gazz. degli Ospitali*:—The properties of guaiacol are of a twofold nature, viz. (1) Strengthening the power of resistance in the organs, and (2) destroying bacilli. Therefore Nobili recognises in this drug the sovereign remedy for tuberculosis, preferring it to creosote. He has successfully treated with it twenty cases of this disease, twelve of which were in the initial stage, and the rest in a more or less advanced stage. Usually, he began with a dose of from 5 to 15 centigrammes after a meal. The drug was given in wine, bouillon, or sweetened water. The first solution was guaiacol, 1 gramme, alcohol ethylic, 200 grammes, tinct. gentian, 25 grammes. Gradually the dose was increased, so that at last the patient could take one, two, and three grammes daily. His observations convince Nobili that the drug is easily taken and is free from any such inconveniences as burning, sickness, vomiting, diarrhœa, coughing, or irritation of the pharynx. This immunity is explicable by the fact that guaiacol is chemically a pure substance, while creosote contains, besides other things, a substance that acts as an emetic. In nearly every patient guaiacol caused an increase of the appetite, sometimes in a striking manner; in many cases eructation and meteorism yielded to it; and it agreed well with some patients who suffered from intestinal tuberculosis in addition to pulmonary tuberculosis. Nobili thinks that this is attributable to the antiputrid and antifermentative properties of the drug, in consequence of which the abnormal decomposition (sc common in phthisic patients) in the digestive canal is prevented. Often the cough, particularly the night cough, grew strikingly less frequent, and nearly always there was diminution of the sputa and very slight expectoration. In many cases where there had been purulent sputum the latter became more mucous, and sometimes had an aromatic odour similar to that of guaiacol, especially after large doses. Frequent microscopic observation showed a decrease of the histological element and of bacilli. In every case that Nobili considered to be relatively cured the bacilli disappeared altogether. Fever is not directly influenced by the drug, but very frequently it sinks, and in many cases ceases. Sweating ceases in some cases, and in no case treated with guaiacol did Nobili perceive profuse perspiration. Generally speaking, the lung symptoms underwent an evident improvement, the rhonchus especially yielding to the treatment. Many patients gained in weight, but when the disease was in an advanced stage with fever there was loss of weight. In one or two cases there was an increase of urine, probably because, owing to better digestion, more solid and fluid food could be taken. The reaction of the urine was always acid, without a trace of sugar or albumen, except in pronounced marasmus. Nobili, therefore, considers guaiacol to be of great value in tuberculosis, especially if it is given in the first stages of the disease and in large doses. He believes, with Fräntzel, that it will eventually take the place of creosote. JOHN ELLIOTT.

2120. *Thompson on the Therapeutic Use of Oxygen Inhalation.*—In a paper read before the New York Academy of Medicine in May 1889, Dr. Gilman Thompson discusses the physical action of oxygen when brought into contact with human blood, and shows by a train of argument, which should be read in the original, how entirely false some of the current notions with regard to the absorption of oxygen are, and hence how futile some of the forms of treatment founded upon them must be. He shows that the blood, while passing through the lungs under normal pressure of atmospheric air, becomes as nearly as possible saturated with oxygen, and hence there is no possibility for the corpuscles to take up more when exposed to an atmosphere containing almost pure oxygen. Under increased pressure a larger amount can be taken up, but the mechanical effects of the pressure become of necessity added to the physiological effects of the increased amount of oxygen. It has been conclusively proved that animals can live in an atmosphere of oxygen at the ordinary pressure, provided that the waste products in the exhaled air are removed. The experience of healthy persons during the inhalation of oxygen has been so varied that no definite conclusions can be deduced from them. A long series of experiments upon healthy animals is recorded, and the following conclusions are come to :—1. When the breathing is normal, oxygen and atmospheric air do not differ materially in effect up to about two atmospheres of pressure. 2. Both oxygen and air under pressures between ½ and 2 atmospheres, relieve the dyspnœa produced by inhaling vitiated air, and oxygen has a distinctly greater effect in this regard than air. 3. The effect seems to be exerted through the respiratory centre, diminishing the rate of breathing, and improving the rhythm of the respiration. 4. Above 2 or three atmospheres a much greater pressure of air than of oxygen can be borne without inducing convulsions. A further series of experiments is recorded in which various lesions were produced in animals, closely resembling in their effects those produced by disease in the human subject, and the results so obtained are compared with the experience of the author and others in the therapeutic use of oxygen inhalation as at present practised for relief of disease. The following conclusions are drawn :—1. Oxygen is of value in neurotic dyspnœa, for the relief of the distressing subjective symptoms. 2. Where there is diminished surface for aëration of the blood, oxygen improves the cyanosis, lowers the rate of breathing, and relieves the subjective dyspnœa. 3. Oxygen is of value where there is diminished inflation of the lung from many causes. 4. It is especially beneficial in the dyspnœa of chronic Bright's disease and uræmia, pneumonia, capillary bronchitis, asthma and catarrhal bronchitis, and sometimes in pulmonary congestion and the early stages of œdema. 5. Great care should be taken to secure chemically pure oxygen. 6. Oxygen may be given freely and abundantly in cases of emergency, without fear of any injurious consequences. Ordinarily it is sufficient to give it pure by one nostril, while the other inhales atmospheric air ; but it is often best to give it for a few moments by the mouth or both nostrils, without admixture of air. Dr. Thompson's paper concludes with a full bibliography of the subject.

E. CLIFFORD BEALE, M.B.

2121. *Cattani on Exalgine* (*Methylacetanilide*).—Exalgine, according to Bardet (*Les Nouveaux Remèdes*, No. 24, April), has the formula $C_9H_{11}NO$. It occurs in white crystals or scales ; the first form is to be preferred as more pure. It is slightly soluble in cold water, more so in hot water, very soluble in cold water with a slight addition of alcohol. Therapeutic action : it is useful in all forms of neuralgia, and rheumatism, acute and muscular. It reduces the temperature much as the other antipyretics of the aromatic series. In diabetes it lessens the quantity of glucose and of water. The dose is from 25 to 40 centigrammes, repeated twice in the twenty-four hours. This dose gives rise to no irritation of the stomach or bowel : it never causes cyanosis as does acetanilide (antifebrin), nor rash, as antipyrin often does. In one case only, after a very large dose, slight erythema was noticed. Exalgine is not to be confounded with analgesine, which is, in fact, antipyrin.

G. D'ARCY ADAMS, M.D.

2122. *Lebowicz on the Therapeutical Uses of Creolin.*—Creolin is a dark-brown syrupy liquid, with an odour of tar, and forming a milky emulsion with water. It is soluble in alcohol and chloroform, and somewhat less so in ether and liquid paraffin. Given to animals in 12-drachm doses, it does not give rise to any symptoms of poisoning. A 1 per cent. solution is fatal to the cholera-bacillus in ten minutes—an effect which is not obtained with carbolic acid even in forty-eight hours. A solution of 1 in 15,000 prevents the development of the bacillus anthrax, as against 1 in 1,250 of carbolic acid. A ½ per cent. solution immediately removes bad odours, and it has perfectly overcome the fetidity of cancer of the uterus in a number of cases. It, moreover, possesses marked hæmostatic properties. In solution, containing from 1 to 2 per cent., its topical application to mucous membranes is apt to cause a good deal of pain; but this can be obviated by using cocaine beforehand. It has been given with advantage in various cases of diphtheria, intestinal atony, gonorrhœa, cystitis, conjunctivitis, &c. The results obtained in obstetrical practice have been excellent. It is best adapted for use as an external application in ½ to ¼ per cent. solutions. It is not suggested to give it internally.

2123. *Blanc on a Method of Administering Chloral Hydrate in Eclampsia.*—The author alluded to the difficulty of administering the drug by the mouth to patients in whom consciousness is impaired or lost, and to the drawbacks and uncertainty of its administration subcutaneously or *per rectum.* He then pointed out that with a patient lying on the back it is easy to introduce liquids *viâ* the nostrils by means of a funnel. Even in deep coma the reflexes continue to act, and, on arriving in the pharynx, the constrictors seize it and convey it to the stomach. This simple plan, however, is not exempt from inconvenience, and the author prefers to use an œsophageal tube, which may be introduced either through the mouth or the nose. The great point is to avoid the ingestion of too concentrated solutions of the drug, which is apt to set up vomiting. One part in thirty or forty, he considers, is as strong as it is safe to use. On the whole, he thinks that medical men give too little rather than too much, as a rule, and he approves of the dose being pushed to ʒiv. in the twenty-four hours in severe cases. Moreover, chloral is not to be looked upon as exclusively a remedy in acute attacks, and the author recommends its use as a prophylactic in cases of marked albuminuria associated with pregnancy in doses of from 40 to 70 grains daily.

2124. *Perret and Devic on Antipyrin in the Treatment of Nocturnal Incontinence of Urine.*—The first case in which it was tried was that of a child 4½ years of age, who was in the habit of passing water in bed several times during the night. Belladonna and the bromides were given without any improvement. From May 20 to 27 he was given twenty-two grains of antipyrin, half at 6 P.M., and the rest at 8. During this period of time the child did not wet the bed at all. The treatment was repeated off and on for some time, and ultimately proved completely successful. Another child, 8 years of age, subject to the same infirmity, was given half a drachm of antipyrin, half at 6 P.M., and the rest at 9 P.M., and the incontinence ceased with the same promptness as in the other case.

2125. *Abet on the Diuretic Action of Chimaphila Umbellata.*—The *Chimaphila umbellata* is a native of North America, and grows in Russia, Sweden, Switzerland, &c. In America the Indians call it *pipsissewa*, and the French Canadians *herbe à pisser.* It yields a yellow, crystalline substance, *chimaphiline.* Having ascertained beforehand that large doses of the hydro-alcoholic extract could be taken without giving rise to any ill effects, Dr. Abet tried it on eleven cardiac patients, all of whom suffered from dyspnœa and more or less diffused œdema. In ten of them the diuretic effects were very remarkable, the dose administered being from a third to half an ounce of the extract daily. Diuresis progressively increased from the second day of treatment, and kept up until the œdema had entirely disappeared. It is therefore claimed to be a safe and efficient diuretic, without any tendency to accumulation.

2126. *Huchard on Pyrodine.*—The chemical designation of pyrodine is acetyl-phenyl-hydrazin. It is a white scaly powder, but slightly soluble in water. It is a blood poison, and in comparatively small doses causes rapid disintegration of the blood-corpuscles followed by hæmorrhages and hæmoglobinuria. The dose ought not to exceed 1 grain daily for an adult. It reduces the temperature in phthisis gradually to normal, and this antipyretic effect persists for some time. Its analgesic effects are said to be superior to those of antipyrin, and 1 grain doses are claimed to calm the pain of neuralgia, the 'lightning pains' of ataxia, and the ache of migraine. Two grains is the maximum dose, and 4 grains gives rise to very uncomfortable symptoms—precordial distress, dyspnœa, pallor, palpitations, and collapse. On the whole the remedy is not one that can be recommended for general use.

2127. *Vigier on Antipyrin and Salicylate of Soda.*—According to M. Vigier, the mixture of two solutions of antipyrin and salicylate of soda does not give rise to any decomposition, but if the two salts themselves are allowed to remain in contact, an oily body is formed with an alkaline reaction.

2128. *Baudoin on Salicylic Acid and Vaseline in Small-pox.*—Dr. Baudoin recommends the use of an ointment containing 1 part of salicylic acid in 23 of vaseline, in confluent small-pox, to be applied to the face and limbs three times a day, each application to be followed by dusting the surface with a powder containing 5 parts of the acid in 125 of talc.

2129. *Vigier on Mucilaginous Pomade.*—After a number of experiments, M. Vigier recommends the following formula:—℞ vaseline, 30 grammes; zinci oxid., 4 grammes; pulv. tragacanth., 2 grammes; tinct. benzoin., ♏xxx.; pulv. saponis, 40 centigrammes; aquæ, 10 grammes. Mix the zinc oxide and vaseline and add them little by little to the mucilage; lastly, add the soap and the tincture. The result is a mucilaginous pomade similar to that used by Professor Unna, and more adhesive than ordinary ointments. ALFRED S. GUBB.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

2130. SKUTSCH.—On Salpingostomy and the Conservative Surgery of the Fallopian Tubes. (*Centralbl. für Gyn.*, No. 32, 1889, p. 565.)

2131. TAIT, LAWSON, F.R.C.S., LL.D.—The Pathological Importance of the Broad Ligaments. (*Edinburgh Med. Jour.*)

2132. MARIANI.—Expulsion of a Rubber Tube through the Anus after Ovariotomy. (*El Siglo Medico.*)

2133. HOWITZ, F. (Kopenhagen).—Adhesion of the Omentum to the Symphysis as an Indication for Laparotomy. (*Centralbl. für Gynäk.*, No. 31, 1889.)

2134. ECKARDT, DR. C. TH.—A Case of Acardiacus Acephalus. (*Centralbl. für Gynäk.*, No. 31, 1889.)

2135. SMYLY.—On Prolapse of the Uterus and Vagina. (*Dublin Jour. of Med. Sciences*, June 1889, p. 465.)

2136. FARLOW, J. W., M.D.—On the Use of Belladonna and Cannabis Indica by the Rectum in Gynæcological Practice. (*Boston Med. and Surgical Jour.*, May 1889.)

2137. SMITH, A. LAPTHORN.—On a Case of Large Fibrous Polypus Treated with Electricity. (*Canada Med. Record*, June 1889.)

2138. Gibbons, R. A., M.D.—Electrolysis in the Treatment of some Chronic Uterine Affections. (*The Practitioner*, May 1889.)

2139. Frank, Dr. J.—On a case of large Abdominal Tumour attached to the Inner Surfaces of the Sixth and Seventh Ribs. (*Obstet. Gazette*, June 1889.)

2140. Dumontpallier, Dr.—On the Treatment of Chronic Metritis by Chloride of Zinc Pencils. (*Rev. de Thérap.*)

2141. Williams, Dr. P. C.—On a Case of Tubal Pregnancy Terminating Spontaneously, *per Vaginam.* (*Medical News.*)

Art. 2130. *Skutsch on Salpingostomy and the Conservative Surgery of the Fallopian Tubes.*—Dr. Skutsch, of Jena, read an interesting paper on a new operation which he termed salpingostomy, before the Congress of the German Gynæcological Society last June. A sterile woman, aged 28, came under his care, suffering from severe hypogastric pains, with swellings on each side of the pelvic cavity which he diagnosed as dilated tubes. Abdominal section confirmed his opinion. The tubes were punctured by means of a Pravaz syringe, and clear yellow serum, free from pus, was thus removed. Dr. Skutsch then determined to carry out a project which he had already in view. Instead of removing each tube, he opened the ostium, allowed the fluid contents to escape, and then cut out of the tubal wall near the ostium an oval piece about one square centimètre in size. The mucous and serous coats of the tube were united by fine silk sutures, around the hole thus formed. A sound was passed through the tubal canal into the uterine cavity on both sides. Then the abdominal wound was closed. The patient made a good recovery, and all pain disappeared after the operation. [The date of the operation is not given.—*Rep.*] Dr. Skutsch further proposed that in pyosalpinx the end of the diseased tube be sewn to the abdominal wound and the pus allowed to escape. When the discharge ceased to be purulent, the tube could be freed from its abdominal attachments and replaced in the pelvis. Dr. Skutsch referred to tentative and conservative operations suggested by other authorities and admitted that more experience of 'salpingostomy' would be needed before it became an established operation. [Chronic disease of the appendages involves serious changes, especially when the tubes are occluded. The diseased parts cannot be handled, in the course of an abdominal section, without great risk. The tube is often tensely distended, and adhesions to neighbouring structures are usually intimate. Hence the tube may easily be ruptured, intestine torn, and circumscribed collections of pus diffused. How far a tube, long out of working order, can be restored to its functions, must remain uncertain, and where a tube is not spoilt for ever, the corresponding ovary may be hopelessly disorganised. Nevertheless, means may yet be found to cure rather than remove diseased appendages by operation, and 'salpingostomy' would appear to be a step in the right direction.—*Rep.*]

2131. *Lawson Tait on Pelvic Hæmatocele after Operations Involving the Broad Ligament.*—When the broad ligament is tied as the pedicle of a tumour, a small capillary may give way and an effusion of blood takes place into the cavity of the broad ligament secured by the ligature. As that cavity remains closed, the hæmorrhage will as a rule be limited and produce no serious effects. Mr. Tait believes that hæmatoceles of this class occur in about eight per cent. of all operations, and but rarely give rise to serious trouble. These effusions generally occur on the fourth or the fifth day after the operation, and are indicated by pelvic pain and discomfort *without any abdominal distension* (the italics are from the original paper). The pulse and temperature also rise, and if a vaginal examination be made, the floor of the pelvis on one side, sometimes on both, will be found fixed. If the effusion be on the left side, it can be distinguished encircling the rectum like a ring, and this is a pathognomonic sign of the accident. Mr. Tait only once had to reopen the abdomen to save the life of a patient, owing to hæmorrhage being extensive. In three or four other instances of hæmatocele, subsequent suppuration has necessitated drainage of the cavity, but all other cases in Mr. Tait's practice have recovered with a transient rise of the pulse and temperature, usually lasting four or five days.

2132. *Mariani on the Expulsion of a Rubber Tube through the Anus after Ovariotomy.*—A woman aged 46 had a large dermoid ovarian tumour removed by Dr. Mariani. There were parietal, omental, and hepatic adhesions. The pedicle was secured by an elastic ligature, and returned into the abdominal cavity. A drainage-tube, of India-rubber, was inserted into the abdominal wound, which closed up in eight days. The tube slipped into the peritoneal cavity, the wound healing over it. A week later, the patient having suffered in the meanwhile from slight pain in the region of the anterior superior spine of the left ilium, the tube was passed at stool. Dr. Mariani believed that inflammation of the colon occurred, the tube finding its way through the softened walls of the inflamed intestine.

2133. *Howitz on Abdominal Section for Adherent Omentum.*—A woman, aged 36, married for fifteen years, but childless, had suffered for seventeen years from pains in the hypogastrium. She had been repeatedly treated for ulcer of the stomach and for uterine disease. Massage, pessaries, and douches had proved of no avail. Vomiting, emaciation, and epigastric, as well as hypogastric, pain wearied the patient. The uterus was fixed, the right tube and ovary swollen. Abdominal section was performed, and the great omentum was found adherent to the parietal peritoneum behind the symphysis. The stomach was dragged downwards, so that the great curvature touched the left anterior superior spine of the ilium. The adhesions were separated, and the omentum carefully ligatured. The patient made a good recovery, and all the troublesome and painful symptoms disappeared. Dr. Howitz believes that the liberation of omental adhesions accounts for the good results often seen when the removal of inflamed ovaries and cystic tubes is attempted yet proved impracticable. Adherent omentum, the result of old pelvic peritonitis, causes great discomfort from the displacement of viscera to which it is attached, and its liberation by operation is quite justifiable.

2134. *Eckardt on a Case of Acardiac Twin Monster where the Bones of the Leg were found attached to the Normal Twin.*—A primipara, aged 22, gave birth at term to a healthy, well-nourished child. Attached to its neck were three long bones, one inch and a half in length. An acardiac twin was born immediately after its brother. The placenta and the precise relations of the cord in each twin could not be noted by Dr. Eckardt, as he was not present at the birth of the twins, and the placenta was not preserved. The monster was of the 'acephalus' variety, the commonest form of acardiacus. [The reporter has described the acardiacs preserved in London museums in the *Trans. Obstet. Soc.*, vol. xxxi., 1889, part 1.—*Rep.*] It consisted of a ball of œdematous flesh bearing an umbilical cord, external genitals (male), and two lower extremities. The feet, fairly developed, were united to the thighs by short fleshy bands, which contained no bones, and bore no external cicatrices or grooves. The long bones attached to the neck of the normal twin proved to be the missing bones of the legs. [As the author states that only three bones were found attached to the normal fœtus, and gives no description of those bones, we may conclude that one tibia or one fibula was wanting altogether. A drawing of the acardiac accompanies Dr. Eckardt's paper. It is to be regretted that he has not added a sketch of the bones.—*Rep.*]

Alban Doran.

2135. *Smyly on Prolapse of the Uterus and Vagina.*—In the *Dublin Jour. of Med. Sciences*, June 1889, p. 465, Dr. Smyly contributes a very clear and useful article on the subject of prolapse of the uterus and vagina. In the first place, the author starts with the sensible proposition that, like the arm or the leg, the uterus has many normal positions, and there is no difficulty in determining when this is normal. The uterus is maintained in position during life by numerous complex arrangements, but in general terms it may be stated to be due to the intra-abdominal pressure and the resistance of the pelvic floor. In a large majority of cases prolapse is due to either a weakening of the peritoneal attachments or of the pelvic floor. This explains two distinct forms. 1. That in which the uterus first comes down, inverting the vagina as it descends, and (2) the form in which the vagina draws the uterus after it. The pelvic peritoneum, owing to its wide surface of attachment, its elasticity, &c., offers a strong resistance to downward pressure, and when this becomes relaxed, the uterus tumbles about in any position. This is generally the result of childbearing. As regards the pelvic floor, the vaginal slit is a source of weakness, it divides the floor of the pelvis into two triangles; the posterior being supported by the levator ani and coccygeus muscles. The vagina is not only supported indirectly by these muscles, but is directly connected with the fascia covering them. When they contract, the perinæum is drawn upwards and forwards towards the pubes, causing a deep cleft between the nates, firmly closing the vagina and causing its axis to become more horizontal; if, however, they be relaxed or paralysed, the posterior triangle falls backwards, allowing the vagina to gape, and the pelvic floor to project. As to the treatment in these cases, much will depend on the pathological conditions present, and a thorough examination should be made to ascertain the state of the muscles and surrounding structures. The first method of treatment is that by massage, as recommended by Thure Brandt; it consists of four procedures: 1. a tapotement of the spine. 2. Massage of the pelvic contents. 3. Lifting of the uterus, the organ being grasped with both hands through the abdominal walls; and 4. The forcible separation of the patient's knees whilst she endeavours to keep them in apposition; this throws the levator ani into a state of firm contraction. In a large majority of cases it is necessary to use a pessary, and some modification of Hodge's is the best. With regard to operative interference, the author has only tried two methods, viz., Hegar's and Martin's, the former in women who have passed the childbearing period, the latter in younger women. In conclusion, Dr. Smyly adds that in all cases where the pelvic floor is incompetent, an operation produces the best result; but where the peritoneum is at fault, it is better to try a pessary first, and to reserve operative measures for exceptional cases where they fail to give relief.

Richard Neale, M.D.

2136. *Farlow on the Use of Belladonna and Cannabis Indica by the Rectum in Gynæcological Practice.*—The advantages claimed for this method of treatment are as follows:—The firm closure of the rectum renders retention of the suppository a certainty. In unmarried women it is unnecessary to interfere with the vagina. The close contact of the rectum with the pelvic organs enables the drug to act quite as well on the latter as it would if passed into the vagina, while absorption by the rectum is more rapid and complete. The author found that the two drugs were most useful in cases of young, unmarried women suffering from dysmenorrhœa, not only during the flow, but for a few days preceding it, and associated with frequent micturition and headache. The too frequent use of the hot douche is condemned; its 'continued use has brought about a flabbiness and relaxed condition of the parts, and a more or less susceptibility to the very symptoms it was intended to overcome.

2137. *Smith, A. L., on a Case of Large Fibrous Polypus Treated with Electricity.*—The patient, aged 40, suffered from severe hæmorrhage, due to the presence of a large polypus, pear-shaped, 4 inches in diameter, and attached to the uterus by a broad pedicle. So great was the loss of blood and consequent exhaustion of the patient that Dr. Brosseau was compelled for the time to abandon operation by the knife. The large size of the pedicle was another factor against surgical interference. Dr. Lapthorn Smith then decided to use galvano-puncture. Eight applications in all were made; the strength of the current averaged fifty milliampères, with a duration of ten minutes at each sitting. The positive pole was chiefly used, and was found to be more destructive than the negative. The patient was entirely restored to health, and the tumour shrunk into an inert mass.

2138. *Gibbons on Electrolysis in the Treatment of some Chronic Uterine Affections.*—The cases treated by the author include four of chronic metritis, one of endocervicitis, one combining both complaints, two cases of caruncle of urethra, both suffering from lupus minimus, and two cases of cancer of the uterus. The results obtained by the use of electrolysis were satisfactory, but then the question arises, whether the same results could not have been obtained with less trouble and expenditure of time by the local application of caustics. Cocaine and strong nitric acid will dispose of a caruncle at one sitting, without an anæsthetic. Lupus, after one good scraping as a rule, soon cicatrizes over. The hæmorrhage from a malignant growth can be just as easily stopped by perchloride of iron as by electrolysis. But in cases of chronic metritis, electrolysis appears able to do more than other agents, especially in those cases where the hypertrophy has not lasted too long and gone beyond the stage of absorption. Dr. Gibbons states 'that the tissue at the negative pole is split up into particles, and that this is brought about by the evolution of hydrogen gas,' and that this action can be demonstrated. We should like to know how. We have watched the process on the web of a frog's foot and no such splitting up could be seen. The bubbles of hydrogen gas had no effect at all on the surrounding tissues, and did not even interfere with the circulation in the capillaries, with which they were in contact. J. Inglis Parsons, M.D.

2139. *Frank on a case of large Abdominal Tumour attached to the Inner Surfaces of the Sixth and Seventh Ribs.*—The patient was a young married woman 26 years of age. In April 1887, soon after marriage, she noticed a hard place, about the size of an orange, a little below the margin of the ribs in the left hypogastric region, which was the site of occasional 'stitchy' pains. An operation was advised, but refused. She became pregnant in July 1887, the tumour having remained stationary. Pregnancy was normal and labour passed off without any trouble. It was then noticed that the tumour was decidedly larger than before, being the size of a fœtal head, and showed plainly through the abdominal walls. During lactation the tumour continued to increase in size, but did not give rise to anything more than discomfort. In December 1888 an operation was decided upon. The pedicle was found to be attached at the junction of the sixth and seventh ribs with their cartilages. It was at least three inches wide and not half an inch long. The tumour weighed 20 lbs. The lower border of the stomach and part of the upper portion of the ascending and transverse colon were adherent. The stump was sewn to the peritoneum. It was thought at the time to be an ovarian tumour, but subsequent examination proved this not to be the case. The operation was followed by some febrile symptoms, probably due to sloughing of the pedicle. There remained a little fistulous track over the pedicle, and a hard flat mass on the right side, caused, it was supposed, by lymph thrown out round the ligatures. The specimen was referred to a committee for examination and report as to its nature.

2140. *Dumontpallier on the Treatment of Chronic Metritis by Chloride of Zinc Pencils.*—The author brought forward 120 cases of chronic, muco-purulent, and pyo-hæmorrhagic metritis treated by him by means of pencils of chloride of zinc introduced into, and left in, the uterus. In 96 out of 100 cases he claims to have effected a cure without any accident, but in the other four some peri-uterine inflammation was set up, though of a mild character and attributable to the patients having left their beds too soon. The cure may be considered as effected two days after the slough has come away, *i.e.* from nine to fifteen days after the operation. No atresia of the cervix usually follows the application, but he suggests the propriety of passing a sound about three weeks later. No complications were noted in respect of the Fallopian tubes or ovaries. When menstruation returned, it was free from pain and of normal duration. He first irrigates the vagina with a $\frac{1}{1000}$ solution of sublimate, and having ascertained the depth of the uterine cavity, he then introduces a pencil of the proper length. A plug of absorbent cotton is placed in the posterior *cul-de-sac* and retained *in situ* by means of some iodoform gauze. The patient, as a rule, experiences but little pain, but, if severe, it should be overcome by means of a subcutaneous injection of morphine.

2141. *Williams on a Case of Tubal Pregnancy Terminating Spontaneously, per Vaginam.*—The patient, a married woman, was seen on Jan. 29, and then thought she was pregnant. She had last menstruated freely in October, but there had been a coloured discharge several times since. The mammary glands were enlarged, but there was no morning sickness nor nausea. External examination revealed nothing special beyond enlargement of the abdomen and tenderness in the pubic region. Examination with the spectrum revealed vagina and labia of natural colour, the cervix uteri normal in size, but rather soft to the touch; the os uteri patulous and emitting a free mucous discharge. During the month of February there was a gradual and steady increase of more or less bloody mucus, accompanied with pain of considerable severity, which she always located 'in the region of the bladder.' By cautious pressure with the hands—one in the vagina and the other in the abdomen—he could distinguish the outlines of the body and limbs of the fœtus. To clear up his doubts as to the exact position of the fœtus, Dr. Williams introduced his finger *in utero*; and proved beyond all doubt that the uterus contained no fœtus. On April 1 he was hurriedly summoned, and found to his surprise that the uterus, which he had satisfied himself was empty on the previous occasion, then contained a four months' fœtus, which was subsequently expelled, and delivery was followed by perfect recovery, a zone of induration, however, persisting in the left iliac fossa for some days. [Ed.—The foregoing history rather points to the pregnancy having taken place in a bifid uterus.] Alfred S. Gubb.

DERMATOLOGY.

RECENT PAPERS.

2142. Róna.—On Extensive Ichthyosis in Infants. (*Archiv für Derm. und Syph.*, 1889, Heft 3.)

2143. Armauer-Hansen.—On the Contagiousness of Leprosy. (*Ibid.*)

2144. Pick.—On Acne Frontalis seu Varioliformis (Hebra), Acne Frontalis Necrotica (Boeck). (*Ibid.*, Heft 4.)

2145. Kaposi.—On Atypical Zoster Gangrenosus and Zoster Hystericus. (*Ibid.*)

2146. Besnier.—On Pityriasis Rubra Pilaris. (*Annales de Derm. et de Syph.*, vol. x., No. 4.)

2147. Brocq.—On the Lichen Ruber of American Dermatologists. (*Ibid.*)

2148. Hallopeau.—On Lichen Planus. (*Ibid.*)

2149. Besnier.—On Diabetic Xanthoma. (*Ibid.*, No. 5.)

2150. Vidal.—On the Treatment of Keloid. (*Ibid.*)

2151. Besnier.—On Vaccinal Lupus. (*Ibid.*, No. 6.)

2152. Darier.—On Follicular Vegetating Psorospermosis. (*Ibid.*, No. 7.)

2153. Zuriaga.—On the Possibility of the Contagiousness of Leprosy. (*Ibid.*)

2154. Kuehnemann.—On the Bacteriology of Verruca Vulgaris. (*Monatsh. für prakt. Derm.*, vol. ix., No. 1.)

2155. Török.—On the Lichen Ruber Question. (*Ibid.*, No. 3.)

2156. Unna.—Ulerythema Sykosiformis. (*Ibid.*)

2157. Sandreczky.—On the Cure of a Case of Leprosy. (*Ibid.*, vol. viii., No. 11.)

2158. The New York Dermatological Society.—On Vaseline. (*Journ. of Cutan. and Genito-Urinary Diseases*, vol. vii., No. 80.)

ART. 2142.—*Róna on Extensive Ichthyosis in Infants.*—The author (*Archiv für Derm. und Syph.*, 1889, Heft 3), referring to observations by Caspary, publishes a case of early ichthyosis, in which the beginning of the disease occurred in the first week of life. In the same family the first-born child was affected immediately after birth, and died of extreme ichthyosis at the age of four months. In the course of the disease great atrophy of the skin of the hands and feet occurred. The morbid processes began by the appearance symmetrically of spots which steadily, although somewhat slowly, increased. Róna considers that in their first development, the morbid changes took place simultaneously in the papillary layer of the cutis and in the epidermis. The first changes observable were small spots of a yellow to a somewhat reddish-brown colour, sharply limited, with a moderate degree of infiltration. Over these spots the horny layer was dry and shining. It was only after several days had passed that the epidermis cracked over these places, and began to desquamate; then they gradually lost the hyperæmia and infiltration. At this advanced stage the skin became a yellowish-red or faint yellow, and the formation of scales and desquamation then took place regularly and unceasingly.

2143. *Armauer-Hansen on the Contagiousness of Leprosy.*—Dr. Hansen (*Archiv für Derm und Syph.*, 1889, Heft 3) recently visited North America in order to make inquiries regarding the descendants of lepers who had emigrated from Norway. He found that of the descendants of 160 individuals none had become lepers. Of the original 160 lepers only sixteen or seventeen are now living, and there are no new cases. This Dr. Hansen considers not to be an argument against the possible contagiousness of leprosy, but that it shows that the mode of life has much to do with favouring the occurrence of contagion.

2144. *Pick on Acne Frontalis seu Varioliformis* (*Hebra*), *Acne Frontalis Necrotica* (*Boeck*).—Professor Pick (*Archiv für Derm. und Syph.*, 1889, Heft 4) relates the history of two cases which show that there are two morbid processes under the above name. In one the morbid appearance begins with small reddish-brown slightly elevated papules, about the size of a pin's head, which rise sharply from the surrounding skin and either disappear gradually, without coming to any other inflammatory stage, or slowly and slightly enlarge. If they have existed a short time, a small central scab forms, and the papule acquires a somewhat umbilicated appearance. The scab remains until cicatrisation has taken place. There is mostly very little suppuration under this scab. When suppuration takes place there is a slight collection of a yellow purulent fluid around the scab with an inflammatory zone. When the inflammation has taken place to this extent a deeper scar is left. The other case, which resembled those described by Boeck, under the name *acne necrotica*, are characterised by hæmorrhagic points which, by confluence, form small violet maculæ. The epidermis becomes thickened and œdematous, and the subsequent destruction in the skin is greater and deeper.

2145. *Kaposi on Atypical Zoster Gangrenosus, and Zoster Hystericus.*—Professor Kaposi (*Archiv für Derm. und Syph.*, 1889, Heft 4) describes four cases of a disease to which he considers the above name appropriate. They were characterised by an eruption, in the form of grouped papules and vesicles, gangrenous destruction of the skin at the base of the eruption and a cyclical course. The eruption is apt to relapse. The author refers to a previously published case (1874) of zoster gangrenosus recidivus. He considers these cases to be neurotic in their origin. The patients were hysterical, although one of his patients was a man. As a rule, the patients were women, lethargic and delicate, and in one of them there was complete hemianæsthesia of the left side.

2146. *Besnier on Pityriasis Rubra Pilaris* (*Pityriasis Pilaris of Devergie and of Richaud*).—The disease which the author (*Annales de Derm. et de Syph.*, vol. x., No. 4) describes under this name was, he believes, not sufficiently distinguished by the older dermatologists. The more recent writers have confounded it with ichthyosis pilaris, lichen pilaris, and psoriasis. Contemporary writers do not mostly distinguish it from the lichen ruber of Hebra, from certain forms of lichen planus of Wilson, and the pityriasis rubra of Rayer, Devergie, and Hebra. M. Besnier, in his long paper, has published a large number of cases collected from various sources. The first case reported was in Rayer's work, published in 1835 under the name of *General Psoriasis: a Peculiar Appearance of Desquamation of the Hair Follicles.* Illustrative cases by Devergie, Tilbury Fox, Hutchinson, Richaud, Rendu, and by the author himself are published in full. The chief features of the disease, as described by M. Besnier, are: the rough prominences of the follicular orifices, desquamation and redness, with exaggeration of the folds of the skin. These features are described at great length. The results of histological examination by M. Jacquet lead him to conclude that there is a histological identity between the pityriasis rubra pilaris of the French and the lichen ruber of American writers. The redness is seen as a delicate ring surrounding the follicles to a very small extent, sometimes producing the appearance of a small reddish papule. It is only exceptionally that the redness appears diffused and extends between the follicles. The hyperæmia remains always slight. M. Besnier considers that histological and clinical observation alike show the specific nature of the malady, and its distinction from lichen ruber and other forms of skin disease associated with desquamation. He maintains that there is no means of distinguishing pityriasis rubra pilaris from the lichen ruber acuminatus of American authors. He considers the disease as clinically analogous with psoriasis, with which it has been frequently confounded. As regards treatment, M. Besnier recommends during the period of irritation and desquamation of the palms and soles local baths, soothing ointments, poultices, and moist applications. In the chronic condition, if the affection is extensive, frictions with soaps, ointments with naphthol and salicyclic acid, cod-liver oil, and, if it is very localised, applications of tar, pyrogallic acid, mercurial plasters, &c.

2147. *Brocq on the Lichen Ruber of American Dermatologists.*—Brocq (*Annales de Derm. et de Syph*, vol. x., No. 4) discusses the papers recently published by American dermatologists on the forms of lichen. He believes that the lichen ruber of most American dermatologists is nothing else than the pityriasis rubra pilaris of the French school—in other words, '*la maladie de Devergie.*' He considers it probable that most of the cases of the grave disease described by Hebra under this name belong to that type. [Two of the cases seen by the reporter under Hebra's care, and described by that authority as typical lichen ruber, could not, he believes, be brought under the category of pityriasis rubra pilaris.—*Rep.*]

2148. *Hallopeau on Lichen Planus.*—M. Hallopeau (*Annales de Derm. et de Syph.*, vol. x., No. 4, report of weekly meeting at the St. Louis Hospital, states that he had observed a case of lichen planus in which the distribution of the disease agreed with the supposition of a nervous origin. It had lasted a month. It presented the aspect of a band about four centimètres wide, commencing at the level of the elbow, descending to the posterior and inner part of the forearm, and occupying the ulnar half of the back of the hand as well as the dorsal surface of the three last fingers. Upon pricking the affected part a distinct diminution of sensibility was found to exist. M. Quinquaud called attention to the fact that there are no traces of scratching upon persons affected with lichen planus. M. Besnier stated that the same peculiarity was noticeable in the case of old men affected with senile pruritus. Those having pruritus from other causes bear the traces of their scratching. The only exception occurs when there is a permanent irritation at one point, especially with pressure. The eruption then appears abundantly. M. Lailler stated that lesions produced by scratching are not observed in urticaria.

2149. *Besnier on Diabetic Xanthoma.*—At the weekly meeting at the St. Louis, March 7, 1889 (*Annales de Dermatol.*, &c., vol. x., No. 5), M. Besnier remarked that in reference to this rare affection a few special peculiarities must be pointed out: (*a*) The greater frequency of buccal localisations. (*b*) The absence usually, but not constantly, of palpebral plâques. A patient of his, having hepatic and intermittent diabetes combined with chronic pruritus, presented, after three years passed under his observation, yellow, palpebral, perfectly characteristic plâques which are the only external xanthomatous manifestation that has yet been produced. There is also to be noted usually the absence of xanthomatous lines in the palmar folds and the greater frequency of punctuated or umbilicated tuberculated forms. (*c*) That the subjective phenomena, pruritus, spontaneous or provoked pains, whether primitive or secondary, &c., are more marked in diabetic xanthoma than in ordinary xanthoma. (*d*) Lastly and above all, diabetic xanthoma usually, not always, undergoes spontaneous involution, is intermittent or remittent, progresses with rapidity, but disappears as quickly without leaving any trace of its passage.

2150. *Vidal on the Treatment of Keloid.*—At the weekly reunion of the Hospital St. Louis, M. Vidal (*Annales de Derm. et de Syph.*, vol. x., No. 5) exhibited a patient in whom a presternal keloid was almost entirely cured by scarifications. Originally the keloid was nine centimètres long, three broad, and projected one centimètre. It had had a duration of many years. Ten years ago it had become painful. The first case which M. Vidal had treated by scarification was that of a young girl in whom the keloid was so painful as to prevent sleep, and it was in order to cut the terminal nerves that he instituted the treatment. With the third operation not only was the pain removed but he observed that the keloid diminished in size. When the treatment is begun, the scarifications should be distant from each other three to four millimètres and cross at right angles. They should penetrate the entire depth of the lesion. It is assumed that the projecting part only represents about one-third of the total thickness. The operation is practised every eight days unless there is inflammation. At the same time it is treated with 'sparadrap de Vigo,' and latterly the scarifications are made closer. No nucleus of the keloid must be left. The treatment is slow in producing results.

2151. *Besnier on Vaccinal Lupus.*—M. Besnier (*Annales de Derm. et de Syph.*, vol. x., No. 6) exhibited at the weekly meeting at the St. Louis, April 4, 1889, a young man 18 years of age, in whose vaccinal cicatrix there was a limited superficial patch of lupus vulgaris. It had been present since he was vaccinated, that is for seventeen years. There was no tubercular manifestation in any member of the young man's family. M. Besnier used the term vaccinal lupus not only because the patch was present in the vaccinal scar, but because he supposes that it was produced by inoculation when the person was vaccinated as a child.

2152. *Darier on Follicular Vegetating Psorospermosis.*—The author (*Annales de Derm. et de Syph.*, vol. x., No. 7) describes under this name a parasitic affection of the skin which appears to be rare, and of which he has observed two samples in the St. Louis Hospital. The elementary lesion in this disease is a small papule on the top of which there is a blackish brown or greyish crust. This crust is prominent, hard and dry to the touch, and is very adherent. When removed, it leaves behind it a depression which corresponds to a dilated follicle. The lesions cover nearly the whole integument, but they reach their maximum of development on the scalp, the face, the sternum, the loins, and above the inguinal regions. Histological examination showed the presence of a parasite belonging to a class of the sporozoa. The parasites were found isolated and in groups in the rete Malpighii, and within the cells. The author regards this parasite as the cause of the disease, and considers that previous cases have been overlooked and erroneously believed to belong to acne and other forms of follicular keratosis. He considers that the case described in the *Jour. of Cut. and Genito-Urin. Dis.* for June 1889 as a case of keratosis ichthyosis follicularis belongs to the same class.

2153. *Zuriaga on the Possibility of the Contagiousness of Leprosy.*—The author (*Annales de Derm. et de Syph.*, vol. x., No. 7) refers to the following facts observed by him at the village of Limat de Valldigna (Valencia, Spain) in connection with those already published in the *Annales de Derm. et de Syph.*, 1888. Liberato Buignes, a muleteer, the descendant of a leprous family, began to suffer from that disease at adult age. He was the eldest of the family. His brothers avoided contact with him after he became a leper, and left their country never to return, all being in perfect health. As yet they are not leprous. Liberato married, and had several children. The eldest is ten years old. None are lepers. They live separately from their father. Rafaël Flores, an inhabitant of the same village, and a companion but no relation of Liberato's, has travelled the same roads and gone to the same inns as a muleteer with Liberato for several years, and at the time when the latter developed the disease they were eating and sleeping togther. Rafaël Flores became a leper at the end of a few years. He has no leper progenitors. His younger sister, Angelo

Flores, who lives with him, became a leper at the age of 26. Rafaël married after having been a leper for some years, and has several children. They are removed from their father, and at present are not lepers. From these facts Zuriaga considers—(1) That transmission of leprosy took place when there was intimacy between the contaminating person and the person contaminated; (2) that this transmission did not take place between relatives—fathers and sons—when there was no intimacy between them.

2154. *Kuehnemann on the Bacteriology of Verruca Vulgaris.*—The author (*Monatsh. für prakt. Derm.*, vol. ix., No. 1) states that in every case of warts he has been able to demonstrate a very characteristic bacillus. He employed Gramm's method as used by Kühne. The bacilli are found between and in the cells of the stratum dentatum. They are very delicate. They are seldom found in the cutis. They are found most plentifully in recent warts. The bacillus can be cultivated on gelatine and agar-agar.

2155. *Török on the Lichen Ruber Question.*—Dr. Török (*Monatsh. für prakt. Derm.*, vol. ix., No. 3), concludes a paper in which cases from Unna's *Clinique* are referred to with the following sentences:— 1. Pityriasis rubra pilaris and lichen ruber acuminatus (Hebra, Kaposi) are different diseases. 2. The lichen ruber acuminatus (Hebra, Kaposi) and lichen ruber planus are related but not identical. 3. The lichen acuminatus ruber (Unna) is a form of lichen acuminatus (Hebra, Kaposi), characterised by more acute symptoms at the outset, and stronger developed neurotic symptoms (lichen ruber acuminatus neuroticus).

2156. *Unna on Ulerythema Sykosiformis.*—Under the name ulerythema sykosiformis (scar erythema) the author (*Monatsh. für prakt. Derm.*, vol. ix., No. 3) describes a case of which he has as yet seen only one example. An inflammatory affection of the skin, localised in the beard, spread to the adjacent hairy parts, crept up towards the temples, and led to complete disappearance of the hair follicles and the papillary layer, to atrophy of the superficial epithelium, and consequently to a peculiar superficial cicatricial condition of the skin. After long treatment the patient had somewhat improved, but a complete cure had not taken place.

2157. *Sandreczky on the Cure of a Case of Leprosy.* Dr. Sandreczky, the physician to the Children's Hospital at Jerusalem (*Monatsh. für prakt. Derm.*, vol. viii. No. 11) reports the cure of a case of leprosy. The patient was a boy of 8 years of age, who had exhibited symptoms of leprosy two years before he was received into the hospital. The disease was a well-marked example of mixed leprosy, with infiltration not only in the skin, but in the pharynx, with a certain amount of anæsthesia in the face, arms, and hands. He did not sweat. He was under observation and treatment for four years, by which time a complete cure seems to have been obtained. The treatment was not specific, but was simply directed to improving and strengthening the system and promoting activity of the skin by work and exercise in the open air, massage, gymnastics, treatment of feverish attacks by iron and quinine, baths containing sapo mollis, iron, sulphur, and baths, with subsequent packing. After two years' treatment a certain improvement was observed, the nodules becoming smaller. The ulcerations healed, the anæsthesia disappeared, the infiltrations could no longer be detected in the neck, nose, and pharynx. The fingers remained contracted. It is supposed there are not more than 500 lepers in Palestine.

2158. *The New York Dermatological Society on Vaseline.*—At a meeting of the New York Dermatological Society, Dr. Piffard (*Jour. of Cutan. and Genito-Urin. Diseases*, vol. vii., No. 80) called the attention of the Society to the fact that it was proposed by the pharmacists in the *Digest of Criticisms on the United States Pharmacopœia*, Sixth Decennial Revision, 1880, to use petroleum as a base for the preparation of all officinal ointments. He said his experience was adverse to vaseline as a soothing ointment, and he asked if the Society regarded vaseline as an appropriate base for unguenta. Dr. Taylor did not think the question could be answered yes or no. Sometimes it was soothing and sometimes irritating. He had found that it decomposed rapidly. Dr. Bronson did not think that it was irritating, but it did harm by macerating the skin. If it was made thick by the addition of other substances, he had found it to be soothing. Dr. Elliot had found vaseline both irritating and preventing the absortion of other substances incorporated with it, and never used it. Dr. Piffard stated that inasmuch as vaseline irritated and prevented absorption when such was desired, he did not think that the proposition to use it as a base for ointments should be allowed to go unchallenged. He would object, among others, to its use in the making of ungt. picis liquidæ, ungt. hydrarg., as it interferes with the absorption of the drug incorporated with it, and in the ungt. hydrarg. ammoniat., ungt. stramonii, ungt. hydrarg. oxid. flav., ungt. plumbi carbonat., &c., owing to its irritating properties. The President, Dr. Keyes, then called for a vote on the question, 'Is it desirable to use vaseline as a menstrum for the preparation of officinal ointments which were intended to act in a soothing manner, or by the absorption of the drug incorporated in it?' The unanimous vote of the Society decided in the negative, and against such use of vaseline.

G. Thin, M.D.

NEUROLOGY.

RECENT PAPERS.

2159. Suckling, C. W., M.D.(Lond.), M.R.C.P., Physician, Queen's Hospital, &c.—Syphilis of the Nervous System. (*Birmingham Med Review*, April 1889.)

2160. Mills, C., M.D.—Spinal Localisation in its Practical Relations. (A case of Trephining.) (*Therap. Gazette*, No. 5, 1889.)

2161. Putnam, James J., M.D.—A Case of Hereditary Muscular Dystrophy. (*Jour. of Nervous and Mental Diseases*, March 1889.)

2162. Booth, J. A.—A Case of Tumour of the Cerebellum. (*Ibid.*)

2163. Kitasato.—Isolation of the Tetanus Bacilli. (*Berliner klin. Wochensch.*, No. 24, 1889.)

2164. Bernhardt, Professor.—On Suspension in Locomotor Ataxy. (*Berliner klin. Wochensch.*, No. 25, 1889.)

2165. Jendrassik.—The Localisation of Tabes Dorsales. (*Arch. für klin. Med.*, Band 43.)

2166. Weir-Mitchell.—A Case of Locomotor Ataxy confined to the Arms. (*Berliner klin. Wochensch.*, No. 25, 1889.)

2167. Hitzig, E.—On Progressive Muscular Atrophy. A Contribution. (*Centralbl. für die med. Wiss.*, No. 7, 1889.)

2168. **Desguin, Dr.**—On a Case of Hydrophobia Two Years after the Bite. (*La Clinique.*)

2169. **Thiriar, Dr.**—On a Case of Analgesic Whitlow (*Maladie de Morvan*). (*La Clinique.*)

2170. **Dujardin-Beaumetz, Dr.**—On the Suspension Treatment of Tabes. (*Bull. Gén. de Thérap.*)

Art. 2159. *Suckling on Syphilis of the Nervous System.*—The author first gives an account of the various symptoms belonging to the nervous system which may be set up by syphilis, even twenty or thirty years after 'secondaries.' Next follows some points in the diagnosis of syphilis, and then come the following cases. Case 1. A gentleman, aged 55; clear history of primary syphilis thirty years previously; sudden vertigo, with numbness in left arm and leg, a few weeks before consultation. He had paralysis of the left arm and leg, and ptosis and dilatation of the pupil on the right side, with anæsthesia of the right side of the face. The attack was preceded by night-headache; it supervened rapidly, and the paralysis soon reached its maximum. Diagnosis: cerebral syphilis, with thrombosis of the right superior cerebellar artery. Potassium iodide and mercury quite failed to relieve, and, though the patient was kept under the influence of these drugs, nodes began to appear on the ribs and on the liver, and then on the head. The nodes appeared at night without pain, fresh ones coming up every night, while others subsided. A few months later, in spite of large doses of the iodide, spinal symptoms appeared, and the patient developed the typical symptoms of hemilateral myelitis, and he ultimately died of exhaustion. This case illustrates (1) the multiple features of syphilis of the nervous system, the crossed hemiplegia, the paralysis of the third and fifth nerves being very characteristic, and then the development of myelitis and nodes; (2) that the disease may be latent for thirty years, and then, when the health is giving way, it may reappear; [the patient had been greatly worried and overworked for some years before the apoplectiform attack]; (3) that some cases of syphilis of the nervous system advance in spite of appropriate treatment. Case 2. History of chancre five years previously, followed by rash. Man, aged 36, headache for twelve months—not at night, but in daytime, especially after brain-work; pains in joints; tenderness in bones. Headache, pains, and rash removed by KI. and Donovan's solution. The exceptional headache here is worthy of note. Case 3. Nocturnal headache. No history or signs of syphilis. Cured by K.I. Case 4. Nocturnal sciatica; syphilis twelve years previously. Quickly cured by K.I. Further cases are promised by the author.

2160. *Mills on Spinal Localisation.—A Case of Trephining.*—In this paper, read before the College of Physicians, Philadelphia, the question of trephining is especially considered in regard to spinal localisation, and the following case of Dr. Robert Abbe is given (see *New York Medical Record*, Feb. 9, 1889). The patient was a young man, aged 22, who had an extradural spinal tumour, with complete paraplegia, and trephining was successfully performed on May 26, 1888. The first symptom was pain in the back; there was swelling of the soft parts two inches wide by three long. There was also disturbance of tactile sensibility in both legs, followed by gradually increasing paresis. The line of hyperæsthesia was between the anæsthetic area and the normal skin. He had uncontrollable twitching of the legs, which were cyanotic when dependent. The spine became rigid and very painful; the hyperæsthesia, anæsthesia, and paralysis deepened. He suffered from girdle pains about the limiting line of the disease. He had incontinence of urine and fæces. Active hectic was present. The spines and laminæ of the eighth, ninth, and tenth vertebræ were cut away, and a dense mass of tissue and desiccated pus was removed by scraping. Sensation began to return on the eighth day; in six weeks he moved both legs. He was exhibited to the Surgical Society of New York eight months after operation, when he walked well without support.

2161. *Putnam on a Case of Hereditary Dystrophy.* A woman, aged 45, in good general health, but inactive when a child, suffered from gradual and steady loss of muscular power from the age of 17. Present condition: Walks extremely slowly, with waddling gait. When weight thrown on either foot, it turns so that the leg almost rests upon the ground, and she is wholly unable to go up or down stairs without either clinging to the balustrade, or going on all fours. Hands and arms still useful, but feeble. Feet and toes practically powerless. Can sit erect, and stand without lordosis, but thigh-trunk muscles very weak. The shoulder muscles are the best; the muscles below the knee are extremely wasted, but rather dense, with the skin drawn tight over them, and the biceps of each arm looks as if hollowed out where it should project. Very feeble grasp. No sign of muscular hypertrophy. Skin dark; patient has had chronic psoriasis for twenty years. Dark colour not confined to diseased parts. Facial and masticating muscles all rather feeble. Psychic condition somewhat impaired, 'she cannot collect her thoughts,' and falls down occasionally from some sensations in the head without losing consciousness. Electrical (faradic) examination showed that the facial nerve, the small muscles of the thumb, and the ulnar nerve, show normal reaction; the reactions of the median nerve, of the biceps, and of the flexus of the forearm are apparently diminished. Below the knee the muscles respond only to maximal currents applied to the nerve, and still stronger currents over the muscles. The reactions to the constant current are exactly proportionable to those of the faradic. No trace of degenerative reaction. *Family History.*—Father strong, died aged 70; mother died aged 86, having had three 'strokes' in advanced age. The father had two brothers; one became gradually crippled in early manhood (17 years), and could not even hold up his head or use any part of his body, but lived to the age of 60. The other was almost exactly the same; after the age of 25 he became gradually helpless, but could wheel himself about in a chair; he lived to the age of 60; a paternal grand-aunt was also a cripple. Patient has a brother, said to be phthisical, and losing the power of his legs; one sister died of phthisis, and four brothers have died of acute diseases. *Treatment and course.*—Daily strong applications of combined faradic and galvanic electricity for five months. Internally, ol. morrh., phosphorus, and arsenic; marked improvement all round, psoriasis also disappearing. After a year the gain in strength was maintained, but the distress in the head increased, and the psoriasis returned. *Muscular examination.*—A piece of muscle was removed from the biceps, and also from the right flexor subl. digit. The biceps piece was examined fresh, and after hardening in Müller's fluid. 'The fresh specimens showed here and there a partial or complete loss of transverse striation, though most of the fibres had preserved their striations.' Many were marked longitudinally by fine granules arranged in lines and spindles, probably fat. Tendency to split up into fibrillæ, some with, others without transverse striations. In the hardened portion, 'transverse sections showed first a very striking variation in size between individual fibres, the smallest being less than half the size of ordinary muscular fibres; the largest at least twice as large as normal fibres.' The corners and edges, instead of fitting together, were rounded off and widely separated by connective tissue, holding few or many cells. Portions of fibres destroyed. Muscular bundles widely separated by connective tissue, often containing glistening yellow masses, varying in size from that of a pus-cell to that of muscular fibre. A large proportion of the muscular fibres altered; marked longitudinally by fine lines, as if teased with a comb, and the fibre is thus broken up into fibrillæ. Central portion of fibre often seems destroyed, leaving a cavity, sometimes only thinned towards centre. Many fibres practically normal. Here and there fibres entirely destroyed. Blood-vessels, in cross sections, appear surrounded with round cells to a moderate degree. Almost everywhere a great increase of interstitial nuclei. Sarcolemma nuclei here and there greatly increased. At rare intervals an excessively atrophied fibre seen, homogeneous, glassy. No intra-muscular nerves could be found on these sections. Sections were examined fresh, and also after treatment with gold chloride and formic acid, to find terminal plates of nerve-fibres, but none could be found. A great majority of the fibres had preserved their transverse striation. 'It was noticeable that the hypertrophic fibres were by no means always those in which the destructive changes were most strongly marked. A small nerve-fibre was found in one perforation, and was traced up to the muscle, but no terminal plates were seen. The nerve itself seemed perfectly normal.

2162. *Booth on a Case of Cerebellar Tumour.*—A girl, aged 10, of healthy parents, and without previous illness, had recurring attacks of headache and vomiting in November 1887, and, after a month or two, pain and stiffness in back of the head and neck. When three years old she had fallen down a flight of steps and struck her head on a stone walk. But this could not have been a serious accident, as her parents did not remember it, although questioned as to falls, till after her death. In February, 1888, the pupils were dilated and inactive to light; there was slight paresis of external rectus, and all the head, especially posteriorly, was sensitive to pressure. Posterior cervical glands enlarged. T. 101·6. P. 100; irregular. Tubercular meningitis was at first diagnosed, and ten grains K.I. given in milk every four hours, afterwards increased to twenty grains every three hours. In March convulsions set in, soon frequent and severe; tonic spasms of the limbs, often with moaning or screaming, the left eye being wide open, the right eye closed tightly. Iodide reduced to ten-grain doses, owing to the increasing prostration. By July the child became gradually perfectly blind, and mostly semi-comatose; she died in August. The optic neuritis had begun as early as February. At the autopsy a large amount of clear fluid escaped from beneath the dura mater. This had previously distended the whole skull, and separated the cranial bones. The convolutions were flattened, and the whole brain was pale, flabby, and softened. 'Placed directly between the lateral lobes of the cerebellum is a large nodular growth, 3 inches long, 1½ inches wide,' and the same vertically. 'It extends into and is attached to the right lobe of the cerebellum. occupying quite an extensive, hollowed-out space in this lobe. The growth also extended into the fourth ventricle, pushed the medulla to the left, and pressed on the right cone (superior peduncle?) of the cerebellum.' Dr. F. Ferguson reports thus:—'The tumour is nodular in outline, in places cystic. Examination shows a large number of spindle-cells, medium in size, embedded in an abundant granular and fibrillated stroma, with a rich vascular supply. The walls being composed of embryonic tissue, are quite thick, and give the tumour the appearance of angio-sarcoma.'

2163. *Kitasato on the Bacillus of Tetanus.*—At the recent German Surgical Congress in Berlin, Herr Kitasato demonstrated the tetanus-bacillus, and claimed that he had succeeded in obtaining this organism free from other bacteria, after experiments made in the Berlin Hygienic Institute. Tetanus serum was sown on agar-agar; after twenty-four hours the bristle-shaped tetanus-bacilli were present along with various other micro-organisms. If the culture were now exposed to a water-bath at 80° C. for half-an-hour, only the spores of the tetanus-bacilli retained vitality; all the rest perished. Inoculations caused tetanus with the development of the bristle-shaped bacilli.

2164. *Bernhardt on Suspension in Locomotor Ataxy.*—The author has tried suspension 256 times on 21 patients, 19 of whom were men; of the 2 women, both tabetic, 1 was only suspended once (she did not attend again), the other was much improved by three suspensions. Half a minute was the time allowed at the first trial, increased by half a minute each time up to 2, 2½, or 3 minutes; very seldom more. Both elevation and descent were effected very slowly. Only two mishaps occurred. One patient became faint (without losing consciousness) the first time, but afterwards bore suspension very well. The other man, subject to laryngeal crises, had an epileptiform attack on being suspended; this recurred on a subsequent attempt, plainly showing that the case was unsuitable for the treatment. Professor Bernhardt cannot agree with Althaus that the good effect of the treatment is due to the breaking up of meningeal adhesions, also connective-tissue scleroses within the spinal cord, by the extension of the spinal column. He leans to Charcot's belief—viz., that the spinal nerve-roots are under less pressure, and that the circulatory conditions are altered in their sheaths, in the spinal-cord membranes, and in the cord itself. The results, therapeutically considered, are thus summed up by the author: The method is applicable to a great number of tabetic patients, whether atactic or not. Carefully conducted by the physician himself, it is, as a rule, free from danger, and is easily tolerated. But it cannot be denied that accidents may occur. Patients much reduced in general health, also the subjects of heart or lung disease, should not be suspended. Suspension does not appear to cure tabes dorsalis any more than any other treatment, but it may be found to relieve some distressing symptoms, and is, therefore, perfectly justifiable in properly selected cases. Apparently this method will not supersede other modes of treatment. (Mitchell 'suspends' by leather slings embracing the elbows, the arms being crossed over the chest. See *Med. News*, April 13.)

2165. *Jendrassik on the Localisation of Tabes Dorsalis.*—This paper is one that demands great attention, because the author is of opinion that the anomalies of sensibility in tabetic subjects are due to alteration in the perception of impressions, not to a lesion in the conducting apparatus of those impressions. The co-ordination centre must be assumed to lie in the cerebral cortex, and two cases were examined accordingly by the Weigert-Pal method of staining. There was found a disappearance of tangential fibres as well as of those coming from the spinal cord, also in some convolutions disappearance of nerve-cells. The upper and posterior convolutions were thus affected, the frontal convolutions remained normal. According to this tabes dorsalis is primarily a cerebral, not a spinal-cord disease. The sclerosis of the posterior columns of the cord is a descending degeneration from the brain. (See *Archiv für klin. Med.*, Band 43, p. 544.)

2166. *Weir-Mitchell on Locomotor Ataxy confined to the Arms.*—The patient was ataxic in the arms only, and here the tendon-reflexes were abolished, while the knee-jerks were increased. This latter sign the author regards as a usual one in the early stage of tabes dorsalis.

2167. *Hitzig on Progressive Muscular Atrophy.*—The first case is thus summarised. A man, aged 24, showed a dystrophy of scapulo-humeral type in the hypertrophic stage. The disease had only existed a short time, and no muscular atrophy was made out on examination. A portion of muscle removed from the biceps showed exclusively hypertrophic fibres (110 μ and more), so that the author is inclined to agree with those who look upon hypertrophy as a stage prior to atrophy. The intermediate substance was far less affected than the fibres. Three more cases of juvenile muscular disease prompted the author to further clinical and anatomical study of the disease. In one case (a man, aged 46) all the rarer symptoms of juvenile muscular atrophy were found—namely, participation of the muscles of the hand, fibrillary contractions, increase of the reflex excitability, paræsthesias. In this case also the biceps could not be made to contract either by the will or the electric current, although there was a fair proportion of muscular substance present. In another case the biceps was contracted in an early stage. The hypertrophy does not affect the connective tissue, as in pseudo-hypertrophic paralysis. The cross section of the hypertrophied muscular fibre is round, instead of being polygonal as in the normal condition. The vital muscular force is stronger than the resistances opposed to it, and the subsequent atrophy is due to the restricted space in which the fibre acts. E. J. Edwardes, M.D.

2168. *Desguin on a Case of Hydrophobia Two Years after the Bite.*—On the evening of May 20, 1889, Dr. Desguin was called to see a man presenting the classic symptoms of hydrophobia. On the 18th he had experienced a violent constriction of the throat, which rendered him quite unable to swallow either a solid or a liquid. On the 22nd the symptoms became more pronounced, and in the evening he expectorated large quantities of frothy mucus. In the night of 22–23, the spasms, the agitation, and the expectoration became still more marked, and he died on the following day during an attack of convulsions. On inquiry it was elicited that he had been bitten on the chin and leg on March 3, 1887, by a dog, which was killed forthwith, and was certified on *post-mortem* evidence to be suffering from rabies. The owner of the dog was bitten at the same time, but sucked the wound and subsequently applied the actual cautery. This patient, on the contrary, did nothing until the following day, when the wounds were touched with nitrate of silver. Three days later he went to Paris, and was under treatment at the Pasteur Institute during three weeks, since which time he has paid no further attention to the incident.

2169. *Thiriar on a Case of Analgesic Whitlow.*—In 1883, Dr. Morvan published a number of observations of a malady which he called 'analgesic paresis of the upper extremities.' His first case was that of a man, aged 60, with necrosis of the ungual phalanx. The large incision made in order to remove the necrosed bone caused the patient no pain. Since then Oger, of Seville, has brought together twenty-nine cases of this obscure affection. On June 9 the author was asked to examine a woman suffering from two osseous whitlows, one on the right ring finger and the other on the left thumb. He was at once struck with the atrophied condition of the upper limbs and the dulness of sensation. Six years before, she had 'jammed' the left thumb, giving rise to a good deal of swelling which had never completely disappeared. Fourteen months since (March 1888) the right ring finger began to swell and be painful without any known cause. The pain was very great, and only ceased on spontaneous rupture taking place. In April 1889 the left thumb, in its turn, began to swell and become painful. The patient appeared to be in robust health. Enlarged glands were found on both sides of the neck and in both axillæ, at the border of the pectoralis major. Suppuration had taken place in the latter. In addition to the muscular atrophy, sensibility to heat was abolished on the left and markedly diminished on the right. On the dorsal surface of the left hand and forearm sensation was altogether abolished. The anæsthesia diminished on approaching the shoulder where sensation was normal on both sides. The nails were intact. Manipulation of the whitlows was not attended with pain, and the patient did not complain of any spontaneous pain. The author is inclined to inscribe this malady to an affection of the nervous system leading to trophic disturbances. Only one autopsy is on record of such a case, and in that two important facts were brought to light—viz. (1) the co-existence of lesion of the spinal cord and of the peripheral nerves, and (2) the localisation of the lesions in the cervical enlargement and in the nerves of the upper extremities. The nervous lesions consisted in an exaggerated production of connective tissue with consequent degeneration. In the cord the same thing was observed in the posterior columns and cornua. He concludes that the nerve lesions, at any rate in his own case, were not primary, but consecutive to a neuritis extending from the seat of injury to the thumb, to the nerve centres, and then reflected down on the other side.

2170. *Dujardin-Beaumetz on the Suspension Treatment of Tabes.*—The author points out that the treatment of nervous affections by nerve-stretching is of ancient date, and constituted the first step towards the suspension treatment of ataxia. Since

Dr. Raymond brought back from Russia the method of treatment practised by Professor Motchoukowski, it has been tried at the Hôpital Cochin in twenty-five cases of ataxia. The result was beneficial in most of them, and in four the further progress of the malady was strikingly modified. The progress of each case was carefully noted day by day, by means of Dr. Marcy's method of diagrammatic lines indicating the line of march. The movement was most marked during the first fifteen days of the treatment, after which the condition became stationary. Six of the patients derived no apparent benefit, but, taking them as a whole, the author expresses a favourable opinion of the treatment which, he says, when properly carried out, is devoid of danger. In one case, however, suspension was followed by syncope, and in another the pain was so severe that the treatment had to be discontinued. He points out that it is unnecessary to lift the patient quite off the ground, it being sufficient if the toes just touch the ground. At first the duration of the suspension may be half a minute, to be extended to three minutes later on. He insists upon the danger of allowing patients to suspend themselves or be suspended by servants. He also experimented with Pichery's method, in which suspension is associated with gymnastic movements, but does not consider it adapted for the treatment of really ataxic patients, but it is of service in pseudo-ataxic patients—*i.e.* those whose troubles occur in the course of neurotaxia or hysteria. The suspension treatment is contra-indicated in very feeble patients, and in those suffering from arterial sclerosis or cardiac disease. He quotes 114 cases treated by Charcot. Of this number, in 64 the notes were incomplete, and of the remaining 50 there were 38 successful and 12 failures. He concludes that, though suspension may not cure ataxia, it certainly relieves the majority of patients suffering therefrom, and, in a rare number of cases, confers a comparative cure. ALFRED S. GUBB.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2171. COLLINS, JOSEPH, M.D.—A Case of Poisoning from Opium Smoking. (*The Medical Record*, Sept. 14, 1889.)

2172. PARK, ROBERT, M.D.—Poisoning by Salt of Sorrel. (*Glasgow Med. Jour.*, September.)

2173. SPRINGTHORPE, J. W., M.D.—Poisoning by Chlorodyne. (*Australian Med. Jour.*, Aug. 15, 1889.)

2174. SPRINGTHORPE, J. W., M.D.—Poisoning by Atropine. (*Australian Med. Jour.*, Aug. 15, 1889.)

2175. SAWYER, AMOS, M.D.—A Case of Nutmeg Poisoning. (*New York Med. Jour.*, Sept. 28.)

2176. HAWES, JOHN B., M.D.—Viper Bite treated by Alcohol. (*New York Med. Record.* Sept. 21.)

2177. BELT, DR. W. A.—Poisoning by Tansy. (*New York Medical Recorder.*)

ART. 2171. *Collins on a Case of Poisoning from Opium Smoking.*—The patient whose case is here recorded was a youth aged 21, who had been an opium smoker for upwards of three years. He was much emaciated, face haggard, eyes expressionless and dull, pupils contracted, pulse feeble and rapid; he had been smoking almost incessantly for the preceding three days, averaging about one hundred and twenty pills of three to five grains each per day. He had not partaken of food or stimulants during this period, and was further weakened by an attack of vomiting and diarrhœa which had set in a day or two previously. He was put to bed, a drachm of brandy administered hypodermically and coffee given. Next morning he was worse, his pulse was 130, respirations 10; he complained of a gnawing sensation in his stomach, and was very restless; koumiss and brandy were given as much as the stomach would tolerate, and $\frac{1}{120}$ grain of atropine every three hours hypodermically until the respirations reached 16 per minute. During the next few days the restlessness was the chief symptom, for which morphine injections were used, but with only slight benefit. The internal treatment consisted of the administration of coffee, koumiss, and champagne by turns. At the end of three or four days he was allowed to smoke opium again, being restricted to about one-tenth of his former amount, and in a week's time his symptoms had all disappeared.

2172. *Park on a Case of Poisoning by Salt of Sorrel.*—A man took some salts of sorrel in mistake for Rochelle salts. He noticed at the time that the taste was different to what he expected, and three minutes later he complained of severe burning pain in the stomach and gullet. He laid down on his bed and some brownish foam came from his mouth; an hour later his wife came home and found him almost unconscious; she administered an emetic of ipecacuanha, which caused vomiting and purging; he then slept for two hours, and, on awaking, complained of violent pain in the loins and back. The pains continued all night, and next day the stomach was washed out, some stringy mucus tinged with blood being thus removed. On the following day he was somewhat febrile; he still complained much of pain in the lumbar region, and he had tenesmus, and was passing some blood in his motions. The gastro-intestinal symptoms improved, but he was left with marked dyspepsia, pain after food, constipation, and great debility.

2173. *Springthorpe on a Case of Poisoning by Chlorodyne.*—A man, aged 26, was brought to the hospital twenty minutes after taking between three and four drachms of chlorodyne. He was then unconscious, with livid face and contracted pupils; there was no stertor, and he could not be roused. He was supposed at first to have taken laudanum, and atropine was successively injected until $\frac{1}{10}$ grain in all had been administered, but with no improvement except slight dilatation of the pupils. The interrupted current and artificial respiration were next resorted to. He was then threatened with failure both of heart and respiratory function, to combat which tendencies artificial respiration, cutaneous stimulation, injections of ether and strychnine, and inhalations of nitrite of amyl were employed. After some hours of assiduous treatment with these various measures he was out of danger, and made a rapid and complete recovery.

2174. *Springthorpe on Poisoning by Atropine.*—The patient, a chemist, aged 52, of drunken habits, took 4 grains of atropine one morning about 7.30 A.M. An emetic was soon administered, but as he continued to get worse he was sent to the hospital, where he was seen at 10.30 A.M. He was then comatose, with stertorous breathing, pupils dilated and insensitive, face flushed, pulse rapid and running, hands and feet rather cold. The stomach was washed out, and half a pint of strong coffee introduced into the stomach; half a grain of morphia was at the same time injected subcutaneously; friction was applied to the skin, and the induced current employed; and afterwards 1 grain of caffeine was injected. The coma, however, became deeper, and the pulse began to intermit. The battery was discontinued, and ether was injected hypodermically. At the end of an hour the pulse was still intermittent, 120, respirations 18; breathing less stertorous. Croton oil was placed on his tongue, but it did not act; a catheter was passed into the bladder, but this was found to be empty. Patient was kept warm with hot bottles, &c., and an ether draught ordered every two hours. The circulation was much improved by the evening, and still further by the next morning, when he became delirious and had hallucinations, his condition then resembling the early stage of atropine poisoning. He eventually recovered, but at the end of a week there was still dilatation of the pupils and some paralysis of accommodation.

2175. *Sawyer on a Case of Nutmeg Poisoning.*—The doctor, when called to the patient, a boy of 3, found him with a normal temperature and respiration; pulse regular, but a little slow; all the muscles completely relaxed. An attempt to rouse him failed, his head falling whichever way the body inclined. The pupils were completely dilated. He learnt that the child had eaten five large nutmegs, soon after which he had complained of feeling dizzy and had fallen asleep, from which state they had been unable to rouse him. He slept continuously for thirty hours, and then awoke as if from natural sleep. He subsequently had a great dislike for nutmegs.

2176. *Hawes on a Case of Viper Bite treated by Alcohol.*—The patient was a boy, aged 12, who had been bitten in the toe by a viper twenty-four hours before the doctor saw him. He was unconscious, pulseless, and cold; the leg was swollen to the hip, and quite blue; the heart's action was rapid and very faint. He was at once put upon teaspoonful doses of pure brandy every five minutes; it was poured well on to the back of his tongue. The brandy was retained, and after two hours a very faint pulse could be felt. The treatment was kept up, increasing the intervals a little between the doses for another six hours, when the patient was conscious and the heart's action improving. It was then midnight, and the brandy was given in tablespoonful doses every half-hour till the morning, by which time the heart was acting well and the patient was drunk, having taken about fifteen ounces of brandy; the leg had been rubbed every half-hour with camphor water, and was much warmer and of a better colour. The brandy was left off, but the rubbing was continued as far as the tenderness of the limb would permit. He had completely recovered from the effects of the brandy and the bite by the fourth day.

2177. *Belt on Poisoning by Tansy.*—Dr. W. A. Belt, of Kenton, O., reports the following case:—Mrs. K——, not having her menses for five weeks, thought herself pregnant, and not wishing to have any more children followed a neighbour's advice and set about taking five drops of the oil of tansy every few hours. Not succeeding in bringing about her menses she took about one drachm on sitting down to breakfast. She felt no unusual symptoms for about half an hour, when a 'dizzy sensation' came over her. She ran out of doors, and a moment later was picked up by her husband in convulsions, resembling epilepsy. There were the spasmodic contractions of the limbs, frothing at the mouth, and unconsciousness. I found her in this state, with a thready pulse, very intermittent, respiration scarcely perceptible, and cyanotic. Thinking there was enough food in the stomach from her breakfast to hold a good part of the oil yet unabsorbed, I administered apomorphia muriate, gr. $\frac{1}{10}$, hypodermically. In a few moments she vomited very profusely, there being a great amount of gastric juice. After this she revived by repeated doses of brandy, but did not regain her consciousness for two or three hours. She remembered nothing about what had happened. Her tongue was lacerated, as is often seen after a severe epileptic fit, the pulse ran up to 120, and temperature to 101° Fahr. for the balance of the day. Headache persisted for three days, and fainting every three or four hours for two days. The menses made their appearance, but not from the action of the drug, for she was nursing a child about six months of age, and they had been irregular. There were no signs of an abortion.

OPHTHALMOLOGY.

RECENT PAPERS.

2178. Millingen, Dr. Van.—Remarks on a Hundred Operations for Trichiasis. (*Centralbl. für Augenheilk.*, July 1889.)

2179. Ranney.—On Eye-strain as a Cause of Headache and Neuralgia. (*New York Med. Record.*)

2180. Raineri, G.—Phenacetin as an Analgesic in Affections of the Eye. (*Gazz. Med. di Torino.*)

Art. 2178. *Millingen on Remarks on a Hundred Operations for Trichiasis.*—Although trichiasis, entropion, and pannus are tolerably common in this country, they are hardly sufficiently so to enable a single surgeon to speak very positively on the relative merits of different operations that have been suggested for their cure. The extreme frequency with which these conditions occur in the East has given Dr. Millingen, who practises in Constantinople, almost unrivalled opportunities of studying their treatment. It is well known that he has now for about twelve years practised a proceeding of his own which he calls by the rather long-winded name of the 'Tarsocheiloplastic operation.' The details will be found fully described in the *Ophthalmic Review* for 1887, p. 309. Suffice it to say here that it consists essentially in splitting the margin of the lid to a considerable height, separating the flaps and inserting between them a strip of mucous membrane taken from the patient's lip. It is claimed for this operation that it entirely prevents any further contraction which may take place on the conjunctival surface of the lid from acting on the cutaneous surface. Considering the length of time that Dr. Millingen has been practising this operation we cannot but feel surprise and disappointment that he has not produced more weighty evidence in support of this proposition than is afforded by this paper. The cases here recorded were all operated on between May 1887 and May 1889. We presume the cases are consecutive, but we do not find it so stated. It is evident that in many of them sufficient time has not elapsed to test the permanence of the result. Considering the enormous number of cases that have been operated on by this method there would, we should have thought, have been no difficulty in finding, say fifty, in which an interval of not less than five years had elapsed since the operation. The cases themselves show that in nearly all there was an immediate and progressive improvement in the vision, and that no recurrence took place in any case while the patient was under observation. Dr. Millingen attributes importance to separating the split surfaces widely at or near the canthi—a point which was not insisted on in the description just referred to. When there is a difficulty in doing this he performs a partial and temporary tarsorraphy, uniting the posterior flap to the lower lid. He admits, however, that when the trichiasis affects the angles recurrence does occasionally take place even after every precaution, and in such cases he recommends excision of the hair bulbs. Dr. Van Millingen has had previous experience of other operations, especially of the Arlt-Jaesche operation, and he came to the conclusion that recurrence of the deformity within weeks or months was the rule. We should have said that this is painting the results in too sombre colours. It is true that recurrence in bad cases is very frequent, but it is often delayed for two or three years, and as far as the evidence afforded by the present paper is concerned there is nothing to show that the author's proceeding is not liable to the same objection. There are some valuable observations on pannus. The author has never seen it come on during the stage of cicatrisation; on the contrary, if already existing, it then begins to improve. The treatment that he has found most efficient is to irrigate the eye twice or thrice daily with a lukewarm solution of corrosive sublimate (1-5000). Atropine he only uses during the acute stage (why he uses this in preference to cocaine is not stated). Copper he reserves for cases in which there are prominent granulations with muco-purulent discharge. The results are given in a tabular form, the vision being given before the operation, at the date of discharge, and 'later.' The last column would have been more useful if it had been stated what interval had elapsed, and if the condition of the lid as well as the vision had been given. W. ADAMS FROST.

2179. *Ranney on Eye-strain as a Cause of Headache and Neuralgia.*—In the *New York Med. Record* Dr. Ranney contributes a very interesting and valuable paper on the subject of headache and neuralgia due to eye-strain, and gives notes of fifty cases treated exclusively by correction. Too many medical men ignore the fact that in almost every case of intractable neuralgia or headache an underlying cause exists, such as a bad tooth, impacted wax within the ear, eyes with defective refraction, imperfectly balanced eye-muscles, an obstruction to the passage of air through one or both of the nasal cavities. Some hidden rectal irritation, and many forms of pelvic disease, are some of the important factors to be inquired into in such cases. Headaches and neuralgias may be divided into three prominent classes:—1, the toxic; 2, the organic; 3, the reflex. The latter class are those most frequently met with, and it is the author's desire to show how many such cases are cured as soon as the error of refraction is corrected, or the muscular spasm of the muscles of the eye is relieved. Some ten years ago the author suffered from continuous and intractable headache; he asked two well-known oculists to examine his retinæ; one diagnosed his condition as 'typical nicotine poisoning of the retina,' the other discovered 'congestion of the brain' and ordered complete rest from work. Subsequently Dr. Ranney himself put his eyes under the influence of atropine, when it was found that he was suffering from hypermetropia of 3·00 diopters; this was corrected by wearing glasses, and he was restored to health and comfort almost at once, so that for ten years he has hardly known what headache is. The author insists on the necessity of placing a patient's eyes under the influence of atropine before attempting to examine for an error of refraction. A solution of 4 grains of sulphate of atropine to the ounce should be used, a few drops being put into the eyes about three hours before they are examined, but in some cases it is necessary to keep the patient under atropine for days before examining. A tabulated account is given of fifty cases confirming the author's views, a careful study of which would be very useful to every medical practitioner. [If our American brethren have failed to pay attention to errors of refraction and other ocular disorders as causing headache, the same cannot be said of practitioners in this country, as a glance at Sect. 1,815 of the *Medical Digest and Appendix* will prove.]

RICHARD NEALE, M.D.

2180. *Raineri on Phenacetin as an Analgesic in Affections of the Eye.*—The most frequent neuralgias in ophthalmic practice are those occurring in the territory of the trigeminus, especially of its superior branch (ophthalmic branch of Willis). These, by contiguity and continuity, may extend to other branches and to the brain itself, causing prosopalgia and hemicrania. The remedies commonly used are quinine, chloral, and antipyrin. Raineri has tried phenacetin in many cases of disease of the cornea (superficial and deep ulcers, abscesses), in iritis, three cases of glaucoma, in purulent conjunctivitis. He gives it after operation (lachrymal tumour, iridectomy, cataract, &c.), as a sedative, for any rise of temperature, and for hemicrania and pain. He gives 25 centigrammes, repeated; 50 centigrammes are generally sufficient; rarely a gramme. In from half an hour to an hour the pain is relieved, and the patient sometimes sleeps. The effects are protracted from twelve to fourteen hours.

G. D'ARCY ADAMS, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

2181. SYMPSON.—On the Diagnosis of Acute Pneumonia. (*Practitioner.*)

2182. CURRIER.—On Vulvo-Vaginitis in Children. (*Philadelphia Medical News*, No. 860.)

2183. KRAUS.—On the Use of Mattoni's Peat Extracts in the Diseases of Children. (*Med. Chirur. Centralblatt.*, No. 28 1889.)

ART. 2181. *Sympson on the Diagnosis of Acute Pneumonia.*—In the *Practitioner*, Mr. Sympson contributes notes of three cases of acute pneumonia in children in which the lung symptoms were entirely absent at first. In all three cases there was severe constitutional disturbance from the commencement of the attack; a very high temperature, with a hot pungent skin, and marked delirium. The lung symptoms did not develop for three or four days, then there was a slight cough with pain in the chest, and later on dulness to percussion and rusty sputum. The onset in these cases was very similar to that of scarlet fever, and the author considers that acute pneumonia resembles very much one of the acute specific fevers, the lung trouble being only the local manifestation of the general disease, just as the intestinal lesions are of enteric fever, or as the false membrane is of diphtheria. All these cases were seen within the first twenty-four hours of the attack, and an early diagnosis seemed impossible; but attention to this theory is desirable, with an idea of showing how probable it is that the poison of pneumonia acts in much the same way as that of an acute specific.

RICHARD NEALE, M.D.

2182. *Currier on Vulvo-Vaginitis in Children.*—The writer begins by observing that, owing to the absence of pubic hair and the prominence of the nymphæ in children, there is less protection from infection in them than in adults. But, in addition to infection, vulvo-vaginitis may be caused by injury, by the introduction of foreign bodies, by masturbation, or by parasites. It may also be congenital as a complication of an intra-uterine attack of measles or scarlatina, or it may be acquired at the moment of birth by infection from the mother; this probably occurs oftenest in breech presentations. The most natural classification is into catarrhal, gonorrhœal, phlegmonous, and diphtheritic. It is often difficult to distinguish the catarrhal from the gonorrhœal form, but if the gonococcus is found it is conclusive of the variety, although by no means conclusive of attempted rape, since the child may easily have acquired the disease from another child by the use of the same sponge, bed, bath, &c. There have been many instances when the gonorrhœal form has spread through the ward of a hospital. The treatment resolves itself into antisepsis, cleanliness, and favourable hygienic surroundings, especially by removal to the seaside. Faulty diatheses, as the rachitic, the scrofulous, or the syphilitic, must be corrected. An injection of warm boiled water should be given with a fountain syringe twice daily for from five to ten minutes at a time. In the gonorrhœal and catarrhal forms two drams of a two per cent. solution of nitrate of silver should be carefully injected every other day and the excess removed. If the introduction of the nozzle causes much pain, this can be prevented by applying, for five minutes previously, an absorbent pad moistened with a five per cent. solution of cocaine. In the intervals, a pad moistened with a mixture of glycerine and bismuth should be kept in contact with the parts by means of a T-bandage.

RALPH W. LEFTWICH, M.D.

2183. *Kraus on the Use of Mattoni's Peat Extracts in the Diseases of Children.*—The two peat extracts (peat-salt and peat-lye) contain all the component parts of the Franzbad peat. Except that the mud is wanting, a bath made with peat extract is fully equal to a natural peat bath in respect of the component parts soluble in water. Forest soil may be added to supply the place of the mud in the natural baths. But Dr. Kraus, who writes this article in the *Med. Chirur. Centralblatt*, says it is a mistake to ascribe the stimulation of the skin chiefly to the mud; it is rather a chemical effect, attributable to the sulphuric iron-oxydulum. The excellent results of Mattoni's peat extract are generally considered to spring from their active stimulation of the skin. A second important effect is the stimulation of the circulation of the blood, which causes an increased supply of blood to the pelvic organs, and therewith an increased transudation of blood-serum into the neighbouring tissues. Dr. Lieber has found Mattoni's peat extract to be particularly effective in anæmic and scrofulous children, especially among the poorer classes. Experiments have proved that the human skin, if intact, cannot resorb the iron salts of the baths. A boy, aged 5 years, had twenty-eight baths. After the first seven (one every day) the irritation of the skin was evidenced by innumerable little excoriations; whereupon followed loss of appetite, paling of the face, and slight emaciation. Iron had evidently been absorbed by the skin through the excoriations; therefore great caution is necessary in the use of the baths as soon as the skin becomes affected. Dr. Kraus notices that in mineral baths there is in addition to the thermic and mechanical irritation of ordinary baths, a chronic irritation of the skin, which causes reflex modifications of the change of substance. In the peat-baths it is the formic acid and the presence of sulphuric salts which cause the reflex action. Though the action of the peat-baths has not yet been clearly and physiologically defined, experience has taught that they are an excellent means of stimulating resorption by furthering an active peripheral motion of the blood, that they do away with the remains of exudations; further, that they have a favourable effect on the circulation and nervous system, causing an increase of blood formation and restoring disturbed nerves. Peat-salt baths belong to the order of irritative and tonic baths, and are above all indicated where it is desirable to bring about active stimulation of the skin and at the same time increase of the temperature; also in cases where the circulation and resorption require to be stimulated. Particularly in the treatment of children there is still a wide field for the use of these baths. In the Poliklinik in Vienna, peat-salt is prescribed for anæmia, chlorosis, hysteria infantilis, chorea minor, rheumatism, oligochymia after exhausting diseases, in all tedious diseases (*e.g.* chronic intestinal catarrh), in disturbances of nutrition, rachitis, scrofula, poliomyelitis anterior, spinal paralysis, and diphtheritic paralysis.

JOHN ELLIOTT.

REVIEWS.

ARTICLE 2184.

Anatomie Topographique du Duodénum et Hernies Duodénales, par JONNESCO. Paris: Aux Bureaux du *Progrès Médical.* 1889.

THIS interesting monograph gives a detailed account of the duodenum, its peritoneal relations, and the pouches connected with it, together with the herniæ which they may cause. The actual shape of this portion of the alimentary canal is very differently described by various writers, whose views are thus arranged: 1. Those describing it as consisting of a horse-shoe shape with three portions; superior horizontal, vertical, and inferior horizontal (Sappey, Cruveilhier, Morel and Duval, Hyrtl, *Anat. Top.*). 2. Those who give to the classical third portion a direction ascending obliquely from right to left (Bourgery, Huschke, Henle, Krause, Hoffmann, Quain, Beaunis, and Bouchard). 3. Those describing the annular form (Treitz, Luschka, Hyrtl, *Anat. Syst.*, Braune, His, Schiefferdecker). 4. Those giving it four portions (Cruveilhier, *note*, Bruce, Young, Treves). According to the author the annular form is typical in infancy (1-7 years); in these cases the point of termination being at the same level as that of the commencement. It is found in adults, in whom it exists in the shape of a U or of a V, the difference, of course, depending upon the portion crossing the vertebral column. After having discussed the development and arrangement of the intestinal peritoneum, and especially that of the duodenum, the author passes on to the interesting subject of the peritoneal pouches and folds.

Of the latter he describes the following: 1. *Lig. suspensorium duodeni*, or hepatico-duodenal ligament, which corresponds to the free border of the lesser omentum. 2. *Lig. cystico-duodenale*, passing from the gall-bladder. 3. *Lig. duodeno-renale* of Huschke, from the upper part of the right kidney. 4. Superior and inferior folds of the left side uniting fossæ. 5. *Lig. duodeno-mesocolicum* of Huschke, from the duodeno-jejunal angle to the inferior part of the transverse meso-colon. The fossæ associated with the duodenum are: 1. *Inferior duodenal fossa* is the most common, the author having met with it in 75 per cent. of his cases; it is situated at the commencement of the ascending portion, is concave upwards, and is unconnected, save rarely, with any vessel. 2. *Superior duodenal fossa*, present in 50 per cent. of cases, and frequently co-existing with the inferior. Concave downwards, it is situated at the level of the superior extremity of the ascending portion of the duodenum, and at the second lumbar vertebra it is associated with the inferior mesenteric vein. 3. *Duodeno-jejunal or mesocolic fossa.*—This is the rarest form (5 out of 30 cases). It never coexists with any other, and may be single or double. It is always related to the inferior mesenteric vein. As regards the correspondence of these fossæ with those described by previous writers, the author states that (1) the inferior duodenal fossa (non-vascular) partly corresponds to one described by Treves under the name of duodeno-jejunal, but when vascular to the duodeno-jejunal fossa of Treitz. (2) The superior fossa is only mentioned, and that briefly by Treves. Waldeyer appears to have seen it, but makes it a diverticulum from the ordinary fossa of Treitz. (3) The duodeno-jejunal fossa, when single, corresponds to that of Huschke. The double form does not appear to have been mentioned by any author.

The relations of the various parts to the lumbar vertebræ are thus described. The superior angle always lies on the right side of the first lumbar vertebra, its pyloric part being on the middle line at the level of its inferior border. It is then directed upwards, backwards, and to the right to reach the superior border. The position of the horizontal part is variable. In children it reaches only the upper border of the fourth lumbar vertebra, or the disk between it and the third. In the adult, in the U-shaped form it lies on the fourth lumbar vertebra. This is the most common position. In the V-shaped form the inferior angle corresponds most frequently to the right side of the lower border of the fourth vertebra, or to the fifth vertebra. The duodeno-jejunal angle lies on the left side of the vertebral column, and corresponds to the first lumbar vertebra (infantile type), or to the second (adult, U or V). In the former it is much nearer to the middle line.

After discussing *seriatim* the means of fixation—viz., the bile and pancreatic ducts, vessels, and nerves (the last of great importance in this respect), the musculus suspensorius, and the membrane of Treitz—the author devotes the concluding chapter of his book to a good account of retroperitoneal herniæ. BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2185.

Recherches Cliniques et Thérapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie. Par BOURNEVILLE, Médecin de Bicêtre, COURBARIEN, RAOULT, SOLLIER, Internes du Service. Paris, 1889. Aux Bureaux du *Progrès Médical.*

THIS is a welcome addition to Dr. Bourneville's already valuable contributions to the literature of epilepsy and idiocy. In the first fifty-nine pages we have a report of the establishment at the Bicêtre for the care and training of idiots. On Jan. 1, 1888, it contained 331 children, imbeciles, idiots, and epileptics. We have an account of the methods used for the education of touch and grasp, and an attempt is made to lay down the principles on which speech should be taught. It does not appear that the author has much faith in those principles, and with farther experience he will probably have less. The preliminary exercises of the mouth and jaw before commencing to teach idiotic mutes to speak are, in my opinion, mere waste of time.

It is known that a good deal of scientific work has been done by the medical superintendents of training schools for idiots. In the Bicêtre Dr. Bourneville has a pathological museum which contains 180 busts and casts, 38 skulls, and 188 brains of idiots. The trades taught are carpentry, shoemaking, tailoring, basket-making, work of blacksmiths, brush-making, and palliasse-making.

The first clinical study is on some new cases of idiocy with pachydermic cachexy, here termed cretinoid idiocy. These are the curious little broad-faced idiots in whom the thyroid gland has been found wanting, as described by Curling, Fagge, and Fletcher Beach. Few such cases have been described by French writers. They seem to be commoner in England than in other countries; at any rate they are very rare in Scotland. The first wood-cut given of a cretinoid idiot is highly characteristic.

In the second paper, MM. Bourneville and Courbarien examine the question of the influence of marriages of consanguinity on the offspring. They are not satisfied with the correctness of the French census returns of the number of married cousins, and unless we know the actual proportion of married cousins to couples who are not related to one another, it is impossible to prove that there is any unusual proportion of unhealthy children resulting from such consanguineous marriages. The result of the observations made by our French colleagues confirms the opinions of those who hold that where the race is healthy there is no danger in such marriages. On examining the cases in which neurotic children were born to married cousins, they succeeded in finding causes sufficient to account for the results without the necessity of assuming any occult principle in the close marriage itself. Thus the unfortunate results assigned to consanguinity are really due to heredity. 'Healthy parents can only procreate healthy infants.'

The third paper on epilepsy and fronto-facial asymmetry has more novelty for English readers. Those neurologists who were present at the International Congress at London, in the year 1881, will remember Dr. Lasègue's lucid explanation of what he called real epilepsy, which commenced about puberty and was always associated with asymmetry of the face and malformation of the bones of the base of the skull. In his inquiries on this subject, Dr. Bourneville has made great use of his collection of casts. He finds asymmetry of the face very common in epilepsy, but such asymmetry is found in those who have become epileptic before puberty as well as after. He regards the deformity of the bones of the face and skull as the result of deficient or unequal brain development, and not the cause of the epilepsy, rather, indeed, the result of it. Dr. Bourneville says 'that both the asymmetry and the disease may be traced to one cause—arrest or irregularity in the concomitant development of the brain and of the cranium. What confirms this idea is that one very frequently observes in cases of epilepsy an inequality of weight between the hemispheres. It would be of great value if we could exactly show the nature of the epileptic convulsions, their seat and their intensity on one side of the body in relation to the hemisphere first affected. Unfortunately such observations are difficult to make, the physician not being often on the spot when an epileptic attack commences. In some cases which have been precisely noted, we can recognise no constant relation.' In my own establishment I always try to note the side on which convulsions begin. Generally they lead off from the side on which the lesion exists, and on which the hemisphere is smaller. In one case which came under my observation almost twelve years ago, in which one hemisphere was much smaller than the other, there was at first Jacksonian epilepsy, commencing from the arrested hemisphere, which sometimes passed into complete epilepsy, with loss of consciousness, and sometimes not.

The next paper is on the action of bromide of nickel in epilepsy. This drug seems to have been first brought forward by Da Costa, but the experiments in the Bicêtre do not encourage us to repeat them. Paper V. treats of a case of slight imbecility with mental instability and perversion of the instincts and generative impulses. Like all Dr. Bourneville's clinical studies, it displays great powers of sustained observation. W. W. Ireland, M.D.

Article 2186.

On Bedside Urine-Testing. By George Oliver, M.D. Fourth Edition. (H. K. Lewis: Gower Street. 1889.)

This (fourth) edition of Dr. Oliver's work contains no departure from the earlier ones in any essential particular, but the author's preface assures us that every paragraph has been carefully revised with a view to greater clearness and accuracy; and in these points the book is certainly not wanting.

An introductory chapter emphasises the utility of paper as a vehicle for test reagents, an improvement in bedside urinary testing for which the medical profession is indebted to Dr. Oliver himself. The only point in the author's remarks upon this subject to which exception might be taken is his tendency to underrate the value of pellets, tablets, and powders in urinary testing; these latter are often preferable to papers in cases where it is advisable to introduce a somewhat large quantity of the test reagent.

A very important matter is alluded to in Chapter II., viz. the untrustworthiness of small pocket urinometers. It is unfortunately quite true that, as the author observes, these little instruments are often valueless and misleading—'the errors ranging from 5 to 7 degrees.' Dr. Oliver proposes as an alternative the use of a glass bead which is in a state of equilibrium in a liquid of specific gravity 1008. When the urine has a higher specific gravity the bead will of course float; water must then be added until the bead begins to sink, after complete mixture of the water and urine, and if this is done in a suitably graduated tube the specific gravity may be read off on the graduations, a higher specific gravity being indicated by a greater degree of dilution. Such a method must yield accurate results in careful hands, but the time and care required are certainly greater than in the case of the ordinary urinometer, and as these instruments are certainly obtainable with accurate graduations, most practitioners would probably prefer to ensure accuracy in the urinometers they use by comparing their indications with those given by a larger and certified instrument.

Nevertheless, we must thank Dr. Oliver for pointing out this important source of error; and it must be acknowledged that his method possesses two great advantages over the ordinary one, as he observes on pp. 40 and 41, viz., that the little bead can be used in cases where the volume of urine attainable is too small to float a urinometer, and, secondly, that the necessity for adding (cold) water to dilute a urine whose specific gravity is above 1008 will diminish the error due to high temperature of the liquid under examination in cases where the specific gravity is taken too soon after the urine is passed. This latter error, however, could never influence the accuracy of observations made by a careful worker, since it is always easy to cool the urine in the test-tube by simply whisking the tube about in a basin of cold water for a minute or so before examining. Chapter III. is important and interesting, and treats of the reaction of the urine to litmus. The author is not satisfied with a mere determination of the effect of the urine upon the colour of litmus, but he makes, by a very simple method (*vide* p. 64) what is really a rough *quantitative* determination of the degree of acidity of the urine; and he gives a very interesting table showing the hourly fluctuations of the reaction of the urine as determined by his alkalinised litmus paper.

It is remarkable that no mention is made of picric acid as a test for peptones in the chapter on the proteids which may appear in the urine, although this test is far superior as regards convenience, simplicity, and accuracy, to all the other tests hitherto proposed for this purpose.

It is also remarkable that in the chapter on albumen-testing, Dr. Oliver prefers the potassio-mercuric iodide test to all others in testing for traces of albumen. It is certain that potassio-mercuric iodide causes a slight opalescence in all urines, if the test is applied carefully, *i.e.* if the tube be looked down upon against a dark surface, while a good light plays upon it from above. This is not the case, however, with picric acid, which is now very largely used in urine-testing, but concerning which Dr.

Oliver is strangely silent. This may possibly be explained by the fact that picric acid, owing to its comparatively sparing solubility, does not 'lend itself,' to use a colloquial expression, to the manufacture of test-papers.

Dr. Oliver asserts that the turbidity produced by potassio-mercuric iodide in normal urines in due to the precipitation of mucin (p. 121), and he says that this turbidity is removed by heat. Other observers have found that, though partially cleared by heat, there is a slight opalescence *always* left after heating with this reagent, even in urines which give no indication of albumen with picric acid. Chapter VIII. is entirely devoted to a brief sketch of the clinical significance of albumen.

Chapter IX. 'on the Detection of Glucose by Test-papers,' gives a full account of the indigo-carmine test, which was introduced by Dr. Oliver himself. This test, which is possessed of great delicacy, but which gives no indications with uric acid or other free acids which may appear in urine, is even proposed by the author as a quantitative one. The observer is directed to note specially the colour of the solution four times in two minutes, at intervals of thirty seconds each.

There can be no doubt that in Dr. Oliver's hands the method has yielded good results, but the combined rapidity and accuracy of observation necessary will probably make it difficult of attainment by the majority.

In Chapter XII., after pointing out the unsatisfactory nature of Pettenkofer's test for bile-salts in urine, the author describes his own 'physiological test' for bile, which depends upon the fact that bile-salts precipitate peptones from solution. The precipitate produced by urine containing bile-salts in a solution of peptone acidulated with acetic acid, is dissolved completely by acetic or citric acids, thus differing from all other precipitates produced in urine by acidified reagents; and it is only partially cleared up by boiling (*vide* p. 199).

The test appears to be perfectly satisfactory, and is susceptible of quantitative application.

There is an entire chapter devoted to the clinical significance of choluria.

The last chapter of Dr. Oliver's work describes some of the apparatus employed in urine-testing, with diagrams of the special forms which the author prefers.

This little work having reached its fourth edition, obviously does not need to be recommended to the medical and chemical professions, who have evidently shown their appreciation of its merits in a highly satisfactory manner.

G. STILLINGFLEET JOHNSON.

NOTES ON BOOKS.

ARTICLE 2187.

Emergency Notes. By GLENTWORTH R. BUTLER, A.M., M.D. Funk & Wagnalls, 44 Fleet Street.

THIS little book, most attractively got up, and with many admirable illustrations, is the work of an American physician with considerable experience in ambulance matters. A cursory review of the book promises well, for in it are found paragraphs devoted to every emergency likely to occur in an ordinary experience; but a closer examination reveals grave deficiencies and omissions: the little book would be useless without a course of lectures to further enlighten its readers; and, as the author expressly says in the preface, it is intended as a work of household reference, a little further detail in the text would be desirable.

In the section devoted to hæmorrhage, general instructions are given for arresting it, but no special details are described for bringing pressure to bear on such important arteries as the carotid, the subclavian, the brachial, and the femoral; a few more paragraphs might with infinite advantage have been devoted to indicating the points *where* and the means *how* to use such pressure. This information would be of more value to the lay student than that given on the healing of wounds by first and second intention. Again, when speaking of fractures the author describes the union of bones by the throwing out of 'callus' round the broken ends, &c., but deals most cursorily with special fractures, such as those of the collar bone, arm bone, and thigh bone; matters which even after demonstration require to be *read* to be fully appreciated and remembered. Fractures are not clearly distinguished from dislocations; nor sprains from strains; indeed, the last are not even mentioned. Convulsions and the various forms of unconsciousness are passed over with very insufficient detail.

It is in the section devoted to poisons where we have most fault to find with our author. Poisons are divided into *Irritant* and *Narcotic*; irritant poisons are thus described: 'Poisons which will corrode or burn the skin or flesh with which they come in contact, for example, strong acids or alkalies.' This definition is wrong, and should be applied to *corrosive* poisons, no mention of which is made. The direction given for cases of poisoning by unknown substances is to administer an emetic *at once*; this is a dangerous rule, and no caution or even mention is made of the danger of emetics in cases of *corrosive* poisoning, such as that of nitric or sulphuric acid. To follow the directions given in this section would often cause grievous if not fatal mischief. For the section on the use of the triangular bandage we are able to say a good word, and the illustrations to this subject are admirable.

OWEN LANKESTER.

ARTICLE 2188.

The Germ Army: How it may be Routed. By A. ARNOLD CLARK, Lansing, Mich.

A VERY readable account in language that can be understood by the laity of the germ theory of disease. It does not profess, we should suppose, to be strictly accurate or intensely scientific, but it is all the same a very useful paper. It explains the action of micro-organisms, how they are introduced into the body, how they develop and multiply, and what effects they produce if pathogenic. It tells how the organisms may be destroyed, and explains the action of vaccination in preventing the spread of disease caused by bacteria.

ARTICLE 2189.

Journal of Microscopy and Natural Science. Th Journal of the Postal Microscopical Society, July 1889.

THIS number contains several interesting papers. The first, on the 'Histology of the Teeth: Notes on Methods of Preparation,' by V. A. Latham, F.R.M.S., is a good epitome of the subject. The most approved methods of cutting, staining, and mounting hard and softened specimens of teeth are given in a systematic and lucid manner. 'Curious Problems in the Struggle for Life,' by Mrs. Alice Bodington, is a sketch more or less founded upon Dr. Clifford Allbutt's last year's address before the Glasgow Meeting of the British Medical Association, and lays stress upon the peculiar immunity of some animals to diseases which are fatal to others. An unsolved problem in bacteriology and biology; an account of 'A Fly's Eye,' by H. M. T. Underhill; a 'Method of Staining Tubercle-Bacilli;' 'Some Fragments of Weed from a Pond and their Tenants,' by J. C. Webb; and an article 'On Cuscuta Gronovii' are all worthy of attention. The remainder of the number is devoted to an article (Part VII.) upon 'The Development of the Tadpole,' by J. W. Gatehouse, F.I.C., devoted chiefly to the formation of the nervous system. Several good plates are introduced to illustrate some of the articles.

VINCENT D. HARRIS, M.D.

ARTICLE 2190.

Gynæcological Electro-Therapeutics. By H. R. BIGELOW, M.D. London: H. K. Lewis. 1889.

NEARLY the whole of this book consists of reprints of Dr. Apostoli's papers on the treatment of uterine fibromata. The first two chapters are devoted to electro-physics. If the author had tried to make this portion of his book difficult of comprehension by the busy practitioner he could not have succeeded better. The section on therapeutics is much easier reading. A *résumé* of Apostoli's cases of uterine fibromata is given, supported by numerous others from reliable authorities, and a very strong position is established. There can be no doubt whatever that by Apostoli's method hæmorrhage can be stopped in most cases, and in a large percentage the improvement is permanent, and accompanied by a cessation in the more prominent symptoms. When we come to diseases of the ovaries and tubes we stand upon different ground. An accurate diagnosis of the actual morbid condition is very often not possible to the most experienced surgeon. An abnormal condition can be made out, but an exploratory incision is required to clear up the diagnosis. Such being the case, the electrician would be groping in the dark; and if the symptoms improved he would still in many cases be ignorant of the disease he had treated. Although with perimetritis and parametritis the diagnosis stands upon safer ground, we have no approximate idea even of the time which either of these effusions will take to disappear in a given case when left untreated. Consequently when electricity is applied, we have no standard of comparison to go by, and are unable to say whether the result is *post* or *propter hoc.* The chapter on metritis and endometritis consists of a reprint of Apostoli's paper on the subject, in which he combats the attacks on his method over again, and gives a diffuse statement of the operative procedure, but we look in vain for any cases, or scientific proof of the superiority of this over other and more easily applied methods of treatment. The probabilities are that the constant current has advantages which cannot be gained by any other means, but, in order to prove this, a series of cases treated by electricity should be contrasted with another treated by ordinary means. We are not aware that this has yet been done. Dr. Bigelow would make his book more valuable if he condensed it.

J. INGLIS PARSONS, M.D.

ARTICLE 2191.

A Text-Book of Physiology. By M. FOSTER, M.D., F.R.S. Fifth edition. Part II., comprising Book II. London: Macmillan & Co. 1889.

THIS second part deals with the tissues, chemically considered, with their respective mechanisms and nutrition. Under this head are included digestion, respiration, the eliminatory mechanisms, metabolic processes, and nutrition.

When a work has reached its fifth edition in thirteen years, and has become so firmly established in reputation as that under review, the duty of the reviewer is limited to chronicling the fact of its reappearance, and expressing such congratulations upon its success as may fitly be offered to its distinguished author.

ARTICLE 2192.

A Note on Nomenclature. By DR. DONALD MACALISTER. Reprinted from *Practitioner.*

IN this note the author offers suggestions on two points of medical nomenclature with a view to securing conciseness and clearness. Thus, first he suggests that the adjective *tubercular* should be used only to denote a morphological appearance, while *tuberculous* is employed as the adjective corresponding to the noun *tuberculosis.* Tubercular would then imply a condition in which small nodes or nodules were apparent, being, in fact, nearly coextensive with the word nodular. The adjective tuberculous, like leprous, luprous, and so on, he would confine to the specific condition of tuberculosis, and speak of tuberculous meningitis, tuberculous phthisis, tuberculous disease of joints, tuberculous glands, and so on.

Again, the term *diphtherial* should, he thinks, refer to the specific disease diphtheria, while *diphtheritic* should be reserved for this variety of inflammation whether it be induced by the poison of diphtheria or not.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2193.

The Action of Alcohol on the Brain. By DR. J. RIDGE. *Medical Temperance Journal,* October 1889.

EXPERIMENTS, chiefly on himself, were made by endeavouring to pass a pointed stick through a swinging ring, counting the number of swings between each successful endeavour, and adding these together when sixty were accomplished. A dose of pure rectified spirit was then taken, and after fifteen minutes the number of swings required to accomplish sixty more swings was counted. After 1 drachm the percentage of increase was 10·5 per cent., 11·6, and 9·8. After 2 drachms the percentage was 16·9 per cent., 7·5, 16·6, and 16·8. After 3 drachms, 38·0 per cent. and 23·5. After 4 drachms the percentage of increase was 44·6 per cent. Two drachms produced transient giddiness. The results were varied by the time of day, amount of light, condition of brain and body, and other causes.

ARTICLE 2194.

The Rôle of Heredity in Alcoholism. By M. PAUL SOLLIER. (Aubanel Prize Essay.) Paris: *Progrès Médical* Office.

M. PAUL SOLLIER sets himself to answer three questions:—1. Can alcoholism be hereditary? 2. If hereditary (similar heredity), in what measure and in what way does the heredity act? 3. Is similar heredity the only form, or may there be dissimilar heredity? In the latter case, what are the affections to which the descendants of alcoholism are most predisposed? In proof of the existence of similar alcoholic heredity the author cites several family histories, such as the following:—A Russian father and grandfather died prematurely from alcoholic excess; the grandson from his fifth year manifests the same tendency. In other cases the heredity had been maternal. Among the authorities referred to are Magnus Huss, Gall, Girou de Bouzareingue, Louis, Prosper Lucas, Bruhl Cramer, Morel, Thomeuf, Contesse, Marcé, Lancereaux, Fournier, Ball, Moreau, Taguet, Féré, Lasègue, Grenier, Legrain, Magnan, and Crothers. M. Sollier, in 350 families, traced heredity in 141. This was similar with 106, dissimilar with 35. An analysis of the similar variety gave of transmission between two generations ninety-three times, between four three. In certain cases, alcoholism—after being transmitted directly between two generations in one branch of the family—was transmitted indirectly, in skipping from the first to the third generation to a member of another branch of the same family. In one case, alcoholism—after being transmitted directly between the two first generations—was transmitted collaterally for the third and fourth, between which it was again transmitted directly. But in the majority of cases alcoholism is transmitted direct from one generation to the following one. While M. Sollier had traced heredity in only 40·29 per cent. of the cases, he is not satisfied that this represents the whole truth. Either voluntarily or involuntarily many of the informants had probably not disclosed all the facts. These statistics are only the minimum per cent. of hereditary alcoholism. Thus, at the very lowest computation, nearly one-half of the cases exhibited heredity; 75·70 per cent. of this being similar, and 24·30 per cent. of the dissimilar type. Darwin and Morel held that alcoholic families became extinct in the fourth generation, but M. Sollier found this not to be the fact with three families.

ARTICLE 2195.

The Journal of Laryngology, September and October, 1889. Edited by Sir MORELL MACKENZIE and R. NORRIS WOLFENDEN, M.D. London: R. Anderson & Co.

THE September number of this journal contains a paper by Dr. J. Middlemass Hunt on Lupus of the Throat and Nose (with illustrations), a note on a case of Syphilis imitating Lupus by Dr. Wolfenden, and a full account by Dr. Sokolowski, of Warsaw, of an interesting case of Fracture of the Larynx which terminated successfully. Laryngotomy was performed, but the tube could not be dispensed with.

The number for October contains notes of a case of Primary Sarcoma of the Tonsil by Dr. Wolfenden. The tumour, which was smooth, attached to sound tissues by a broad pedicle, and but little larger than a Barcelona nut, was removed without hæmorrhage with a galvano-cautery snare. The remainder of the numbers consists as usual of numerous abstracts, reports of meetings, &c.

E. CRESSWELL BABER, M.B.

ARTICLE 2196.

The Mortality of Acute Pneumonia. By C. W. TOWNSEND, M.D., and A. COOLIDGE, Jun., M.D., of Boston. (Reprinted from the *Transactions of the American Climatological Association.*)

THIS interesting monograph is derived from a careful statistical study by the authors of all the cases of acute lobar pneumonia treated in the Massachusetts General Hospital, from the first case in 1822 up to the present day. The total number of cases amounted to about 1,000. Looking at the fact that the most radical changes in the methods of treatment have been effected during the period, the authors set themselves the task of ascertaining whether the mortality as a whole has been lessened, and, if so, to what the improvement is due. After proving, by quotation of others' work, how fallacious a simple death-rate must be when considering a disease like pneumonia, they proceed to the analysis of their own tables, which at first sight showed a marked and steady increase of mortality throughout the whole period. Closer examination proved that certain factors materially affected the death-rate. Such were the greater age of the patient, intemperate habits, previous delicacy or occurrence of complications, and, lastly, the nationality of the patients, the Irish and other foreigners being more numerous amongst the fatal cases than the Americans. It appeared that all these factors which go to swell the columns of the death-rate have been steadily increasing during the last few decades. Looking next at the tables, after exclusion of all these latter cases, they found that the mortality from simple pneumonia has undergone but little change in the last sixty-eight years, notwithstanding the great alterations which have been effected in its treatment. Before the year 1850 the treatment was essentially active. Bleeding, blistering, and purging were freely practised. Between 1850 and 1860 a more moderate degree of activity prevailed, but after the latter date and ever since, treatment, with a few exceptions, has been for the most part expectant or stimulant. Notwithstanding these variations the death-rate for the uncomplicated cases stands as it has always stood, between 9 and 15 per cent. The duration of the disease and its convalescence have in like manner remained unaffected. Equally little altered by methods of treatment are the results of the aged, intemperate, or complicated cases. An average death-rate of 40 to 41 per cent. has attended the heroic as well as the expectant methods.

E. CLIFFORD BEALE, M.B.

ARTICLE 2197.

Medico-Legal Papers. First Series. Third Edition. New York. Published by the Medico-Legal Journal Association.

THE Medico-Legal Society of New York was founded in 1867, and issued its first series of papers in 1874. The original edition and the revised edition have long been out of print and are now scarce, and the Society at the suggestion of the President, Mr. Clark Bell, has reprinted the papers in the volume now before us. The communications contained in it are of great interest, many of them referring to notorious criminal trials. One will be of especial interest to medical men on this side of the Atlantic as it relates to the trial of Constance Kent. It is by Dr. W. A. Hammond, and is entitled 'The Medico-Legal Value of Confession as an Evidence of Guilt.' Apart from its intrinsic interest on account of the particular criminal concerned the paper is of very great value. The volume is enriched with a number of illustrations not to be found in the original edition. Among them we notice portraits of William Tuke, Swaine Taylor, Beck, and many others, amongst whom we must not fail to mention the President of the Society to whose enthusiasm and liberality the Society is most deeply indebted.

ARTICLE 2198.

Transactions of the Obstetrical Society of London, Vol. XXXI., for the year 1889. Part III., for June and July.

THE third fasciculus of the *Transactions* for the current year are of more than average interest, and three out of the four regular contributions which it contains are purely obstetrical. Dr. Matthews Duncan, in his contribution on 'Laceration of the Vagina in Labour,' comments upon two cases of a remarkable vaginal abscess in women recently confined. Alarming symptoms were present. He attributes the abscess to laceration of submucous cellular tissue, and consequent hæmatoma, followed by suppuration. On digital exploration, a rounded opening can be detected, admitting the tip of the finger, which, when pressed, enters a cavity as big as a walnut. Dr. Herbert Spencer's 'Diagnosis of Placenta Prævia by Palpation of the Abdomen' is of great interest. It turns on the much-disputed point as to whether the position of the placenta during pregnancy can be diagnosed by palpation. The instructive discussion which followed the reading of the paper, and is recorded in full, shows that the leading obstetricians in this country are completely at variance on this important question. Dr. M. Handfield Jones contributes a paper on 'Chorea in Pregnancy.' He believes that it is reasonable to consider chorea occurring in pregnancy by itself, since in all such cases there exists one common groundwork, an unstable condition of the nervous system—a condition always present in the gravid constitution, of which it forms an integral part. The fourth paper, by the author of this criticism, is on a case of 'Anterior Serous Perimetritis simulating Ovarian Sarcoma when Explored by Abdominal Section; Recovery with Disappearance of the Cyst.' The patient was a young girl, whose brother had died of tuberculosis; an abdominal tumour appeared, and the catamenia ceased. There were justifiable reasons for suspecting gonorrhœa, or pregnancy. The tumour felt like an ovarian sarcoma. On exploration a firm spongy tissue was cut into, closely adherent to the parietes, and it did not seem justifiable to remove the diseased mass. Fifteen months after the operation the patient was again seen by the author of the paper, and the tumour-like mass had entirely disappeared. The name of the paper gives the author's definition of the case. Mr. Knowsley Thornton believed that the case was tubercular; for exploratory incisions were occasionally followed by temporary cure. Amongst the notes on pathological specimens, perhaps the most important relates to a case of primary cancer of the Fallopian tube, with recurrence and death. The pelvic viscera were removed and exhibited before the Society by Dr. Amand Routh. ALBAN DORAN.

ARTICLE 2199.

Lectures on General Pathology: a Handbook for Practitioners and Students. By JULIUS COHNHEIM, Ordinary Professor of General Pathology and Pathological Anatomy in the University of Leipsig. Translated from the second German edition by ALEXANDER B. MCKEE, M.B. Dublin, Curator of the Museums, Royal College of Surgeons in Ireland. With Memoir by the Translator. Section I. 'The Pathology of the Circulation.' London: The New Sydenham Society. 1889.

DR. MCKEE has discharged a difficult duty most ably, and conferred a boon on British students of pathology. The German language is unfortunately hard to acquire, and Professor Cohnheim's style was not of the simplest. Purely descriptive matter is often difficult to translate, as Henle's and Hyrtl's works prove, but the disquisitions and arguments which prevail throughout a standard work on pathology are all the more difficult to master when the reader has to render them into English. Through Dr. McKee's exertions, the reader can now study Professor Cohnheim's work as a student of pathology alone, unburdened by the extra task of unravelling the intricacies of German construction. This volume includes chapters on the pathology of the heart, on thrombosis, embolism, inflammation, hæmorrhage, plethora and anæmia, hydræmia and anhydræmia, chronic anæmias, and the pathology of the lymph stream. The book is printed and bound uniformly with other works included in the New Sydenham Society's publications. ALBAN DORAN.

DIETETIC NOVELTIES.

WHOLESOME WINES.

WE have received from Messrs. G. W. Christie & Co., 25 Milton Street, London, samples of red wine in flagons, and have submitted the brands 'Premier Burgundy,' 'Chateau Rosac,' and 'Carlowitz' to an exhaustive chemical analysis, and find them to be quite free from artificial matter. They are pleasant and agreeable to the palate, and at the same time possess body and full flavour. They are pure and free from acidity, and may be safely recommended as sound and nutritious wines. Medical men will find them useful in their practice, especially as they are offered at a very moderate price.

PATENTS.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37 *Chancery Lane, London, W.C., from whom all information relating to Patents may be had gratuitously.*]

14,225. The treatment of patients after excision of the hip, or other joints, or fractures of the bones of the lower limbs. EDWARD STANMORE BISHOP, 68A Market Street, Manchester, Sept. 9.

14,336. A new or improved surgical boot for invalids and others suffering from weak ankles or other diseases, and defects of the feet. CLYDE BANNISTER BROWN, Beverley House, Southgate Park, Friern Barnet, Sept. 11.

14,403. An improved dental plate medal. JOSEPH PORTER MICHAELS, 46 Lincoln's Inn Fields, London, Sept. 12.

14,562. A method and apparatus employed thereby for destroying the germs of infectious maladies. ALFRED WASSMUTH, Barmen, Sept. 16.

14,780. Improvements in the construction of body batteries for curative purposes. GEORGE TOYE, 5 Sunnyside Villas, Childs Hill, London, Sept. 19.

14,840. Improvements in cases for holding or securing surgical and sewing needles, and other like articles. THOMAS WILLIAM FLETCHER, 125 Ipsley Street, Redditch, Sept. 20.

14,937. Improvements relating to inhalers and to compounds to be used therein. JOHN HENRY PECK, 45 Southampton Buildings, London, Sept. 21.

15,222. An improved apparatus for the relief and cure of chest and other diseases in human beings and animals by heated air. FRANCIS EDWARD MACDONALD, 13 Goldsmith Street, London, Sept. 27.

SPECIFICATIONS PUBLISHED.

16,550. GROSSMANN & PERLS. Medicinal baths. 1888. 4*d.*

12,635. TRUAX. Surgical pumps. 1888. 8*d.*

12,321. SLOAN. Surgical bed elevator, &c. 1888. 6*d.*

15,063. DEACON & HURTER. Chlorine. 1888. 6*d.*

The above specifications published, may be had of Messrs. Rayner and Cassel, Patent Agents.

NOTICE OF MEETINGS.

THE MEDICAL SOCIETY OF LONDON.

(*Instituted* 1773.)
11 Chandos Street, Cavendish Square, W.
116TH SESSION, 1889-90.

The Meetings will take place on the following Evenings, at 8.30 P.M., unless otherwise stated.

The Meetings of the Council will be held before the Ordinary Meetings on the Evenings marked C; *also on Friday, Feb.* 21, *and on Monday, June* 22, 1890; *at* 7.45 P.M.

	1889.	
MONDAY ..	Ordinary Meeting	Oct. 21 C.
„ ..	„ „	„ 28
„ ..	General Meeting	Nov. 4 C.
„ ..	Ordinary Meeting	„ 11
„ ..	„ „	„ 18
„ ..	„ „ (Clinical)	„ 25
„ ..	„ „	Dec. 2 C.
„ ..	„ „	„ 9
„ ..	„ „ (Clinical)	„ 16
„ ..	„ „	„ 23
	1890.	
MONDAY ..	1st Lettsomian Lecture	Jan. 6 C.
„ ..	Ordinary Meeting	„ 13
„ ..	2nd Lettsomian Lecture	„ 20
„ ..	Ordinary Meeting (Clinical)	„ 27
„ ..	3rd Lettsomian Lecture	Feb. 3 C.
„ ..	Ordinary Meeting	„ 10
„ ..	„ „	„ 17
„ ..	„ „ (Clinical)	„ 24
„ ..	General Meeting for the Election of Officers and Council, at 8 P.M.; Ordinary Meeting at 8.30 P.M.	Mar. 3 C.
SATURDAY ..	ANNIVERSARY DINNER	„ 8
MONDAY ..	Ordinary Meeting	„ 10
„ ..	„ „ (Clinical)	„ 17
„ ..	„ „	„ 24
„ ..	„ „	„ 31
„ ..	„ „ (Clinical)	April 14 C.
„ ..	„ „	„ 21
„ ..	„ „	„ 28
„ ..	ANNUAL ORATION AND CONVERSAZIONE	May 5

⁂ An abstract of the communications for publication in the journals should be handed to the Hon. Secretaries before the meeting.

The Meetings marked 'Clinical' will be exclusively devoted to the Demonstration of Diseases upon patients brought before the Society. The time occupied by each Demonstration may not exceed ten minutes. Printed cards will be provided for a description of the cases for publication in the *Transactions.*

The Lettsomian Lectures will be delivered by Edmund Owen, M.B., F.R.C.S., 'On Subjects in connection with the Surgery of Infancy and Childhood.'

The Annual Oration will be delivered by A. E. Sansom, M.D., F.R.C.P.

The Fothergillian Gold Medal Subject for the Essay of March 1890:—'On Peripheral Neuritis.' Subject for the Essay of March 1891:—'The Temporary and Permanent Mental Derangements which follow Surgical Procedures.'

Essays are to be sent to the Registrar at the Society's House, on or before Nov. 1 next preceding.

CHARLES EDWARD BEEVOR, M.D. } *Hon. Secs.*
CHARLES ALFRED BALLANCE, M.S. }
W. E. POOLE, *Registrar.*

GOSSIP.

A GRANT of 80,000 marks (£4,000) has been made by the German Imperial Government towards the expenses of the International Medical Congress, to be held at Berlin in 1890.

A YOUNG lady, Señorita Manuela Solís, took her degree in medicine the other day in the University of Valencia.

A SEVERE epidemic of trachoma recently prevailed at Kalocza. Of 22,000 inhabitants, no fewer than 2,000 were affected.

DR. VON ZEHENDER, the distinguished professor of Ophthalmology at Rostock, and editor of the *Monatsschrift für Ohrenheilkunde*, has resigned his chair, having reached the appointed limit of age. He is succeeded by Dr. Berlin, late of Stuttgart.

A NEW Ophthalmological Society has recently been established in Paris. M. Chevalereau is president, M. Chauvel vice-president, and M. Gorecki general secretary.

PROFESSOR GIUSEPPE RUGGI, the well-known Italian surgeon, completed his 200th case of laparotomy on Aug. 1, and began his third 'century' on the 5th of the same month.

THE *Riforma Medica*, a daily medical journal published at Naples, has just received the first prize in the section of medical publications at the Exhibition of Hygiene and Medicine recently held at Padua.

A SUBSCRIPTION has been started in Italy for the purpose of placing a marble bust of the late Professor Loreta in the hall of the University of Bologna.

THERE are 204 doctors and eight veterinary surgeons practising in Bulgaria. Among the former there are three women.

PROFESSOR WIDERHOFER, of Vienna, who was recently thrown from a mule whilst at Madonna di Campiglio, in medical attendance on the Empress of Austria, and sustained a fracture of the clavicle and severe contusions of the head, back, and extremities, is now making favourable progress towards recovery.

A Pasteur Institute for England.

THERE is some talk of establishing a Pasteur Institute at Cambridge. It is estimated that the expenses for the first year would not exceed £700. It certainly seems absurd that England, which furnishes so large a quota of patients for M. Pasteur, should not have an inoculation station within its own shores.

Examinations in Public Health at Cambridge.

OWING to the large number of candidates (forty-five) at the examination for the diploma of Public Health of the University of Cambridge, the four examiners asked for assistance. Dr. Alfred Carpenter and Dr. Turner, Lecturer on Hygiene at Guy's Hospital, were accordingly appointed extra examiners.

A chemist's mistake.

ON AUGUST 3 the Ninth Chamber of the Tribunal of the Seine condemned a chemist who had supplied opium pills instead of sulphate of quinine pills, which had been prescribed, with the result that the patient died, to three months' imprisonment, besides 40,000 francs (£1,600) damages. It is said by some of the French journals that it is a common thing for chemists in France to insure themselves against the consequences of accidents of this kind. This is a development of insurance which we are thankful to believe does not exist in this country. It would be interesting to know whether French doctors are allowed to insure against the results of possible actions for malpraxis, or quacks against the penalties inflicted for illegal practice.

Some Russian statistics.

STATISTICS, recently published on the authority of the Sanitary Department of the Russian Ministry of the Interior, show that in 1887 the population of Russia was 110,482,627. During that year the births amounted to 4,884,447, and there were 3,288,838 deaths. The total number of persons who received medical assistance was 16,860,000, the number of medical practitioners throughout the empire being 17,459. In 1888 the number of doctors had risen to 18,334, and this did not include 698 women holding the diploma of Doctor of Medicine.

Cremation in France.

CREMATION is making slow but steady progress in France. Several persons living in the provinces having expressed a desire that their remains should be cremated, the French 'Consultative Committee of Hygiene' has requested M. Richard to draw up a report on the conditions under which the bodies of persons dying outside Paris can be brought there for cremation.

Hypnotism as an anæsthetic.

AT a recent meeting of the Paris Académie de Médecine, M. Mesnet reported the case of a woman upon whom M. Tillaux had operated for vaginal cystocele while she was in a hypnotic sleep. The operation lasted twenty minutes, during which the patient never moved. When she awoke she was much surprised to find that the operation had been done. There was sharp hæmorrhage after the completion of the operation, which M. Tillaux attributed to the cessation of the spasmodic contraction of the small vessels which occurs during the hypnotic sleep.

Hereditary marks.

A CASE of physical peculiarity not less remarkable than the famous horse-shoe vein on the forehead of Redgauntlet, is given in a recent number of the *Univers Illustré*, on the authority of M. E. Pascal. In an old Limousin family nearly all the members —women as well as men—have from earliest youth a tuft of perfectly white hair, such as adorns the head of a well-known London artist. It is situated most often over the brow, sometimes on the temple, more rarely at the back of the head. The family portraits show the white lock, for which the family has been famous in their part of the country for three hundred years. They are said to be very proud of it.

The University of Vienna.

THE programme of the Vienna University for the winter semester which is now beginning, announces 228 courses of lectures in the medical faculty to be given by 22 ordinary and 32 extraordinary professors, and 78 *privatim docentes* and assistants. During the past summer session the total number of students in all the faculties was 5,448 (4,554 ordinary, and 994 extraordinary); of these 2,064 ordinary and 486 extraordinary students belonged to the Medical Faculty. Of foreign countries Russia was represented by 91 students, America by 62, Roumania by 55, Servia by 42, Germany by 32, Greece by 17, and Bulgaria by 16. England does not appear in the list. Our newly qualified men do not often round off their studies with the scientific *Wanderjahr* without which no American physician seems to be able to settle down in practice. The few English students who do visit foreign schools, especially those of the Fatherland, are often disappointed with the clinical teaching, and perhaps a trifle scandalised by the clumsiness and general uncouthness of operators whose names *volitant per ora virom.* The purely scientific teaching on the other hand is generally recognised as admirable.

Italian Universities.

THERE are 21 Universities in Italy, 17 royal and 4 provincial. The former are arranged in two classes, 10 belonging to the first and 11 to the second. The Universities are very unequally distributed throughout the kingdom, Sicily having 3, Sardinia 2, the States of the Church 7, whilst the Kingdom of Naples, Piedmont, and Venetia have only 1. The one most frequented is that of Naples which has 3,900 students; then comes Turin with 2,100, Rome with 1,200, Bologna with 1,160, Padua and Pavia with 1,000 each, and Palermo with 950. The provincial Universities (Camerino, Urbino, Perugia, and Ferrara) are the least frequented, that of Ferrara having only 39 students, and being only kept up by the town in memory of the part played in the sixteenth century by the Este family. The Royal Academy of Milan and the Royal Institute of Florence, which are flourishing centres of higher education, are not included in these statistics.

The Congress of Physiology at Basle.

THE first Congress of Physiology, which was held at Basle last month, is spoken of as having been a model of what scientific gatherings should be, that is to say, it combined the maximum of work with the minimum of junketing and miscellaneous festivity. The idea of holding such a meeting emanated from England, and it was taken up both at home and abroad with as much enthusiasm as physiologists could be thought capable of. The task of organising the Congress fell on Professor Miescher, of Basle, who spared no trouble to make it a success. The invitations were issued in January, and 129 physiologists responded to the appeal. Among our countrymen who took part in the proceedings were Drs. Michael Foster, Gerald Yeo, Gaskell, A. Waller, Beevor, Langley, and Halliburton, and Mr. Victor Horsley. Germany sent Heidenhain, His, Hermann, Rosenthal, Goltz, and others, to the number of 26; Italy was represented by Mosso, Fano, and Albertoni; and France by Chauveau, Dastre, Arloing, Charrin, and several others. A special feature of the meeting was the number of practical demonstrations, which were given in the 'Vesalianum,' the Institute of Anatomy and Physiology. Mere discussion was not encouraged, and the medical press was admitted in a sort of courteously muzzled condition. The luminaries of 'pure' science were probably afraid that the average medical journalist would hardly be equal to the task of reporting their abstruse lucubrations. The next meeting is to be held in three years' time in some French-speaking town of Belgium or Switzerland.

Dentists in Italy.

STEPS have recently been taken to place the practice and teaching of dentistry in Italy on a better and more scientific footing. A petition was recently addressed to the Italian Minister of Public Education by the 'Jury of the Order of Sanitarians' in the province of Milan, praying that dental surgery might be raised to the same rank as other medical and surgical specialities by obliging dentists in future to be qualified medical men. It appears that certain Italian Universities have been in the habit of giving licences to practise dentistry after an easy examination, which could be passed by persons almost entirely ignorant of medicine and surgery. The following regulations were thereupon enacted by the Superior Council of Public Education:—1. According to the fundamental law relative to public education no University has the right to grant special diplomas of 'surgeon-dentist;' the conferring of such diplomas by certain Faculties as a matter of custom is an abuse which must henceforth cease. 2. Whoever wishes to practise dentistry must graduate in medicine and surgery. 3. The teaching of dentistry is carried on in the Surgical Institutes of such Faculties of the kingdom as can show that they possess the necessary means and *personnel* capable of teaching the speciality up to the level of its most recent advances. In order to prevent any inconvenience that might be caused by the immediate enforcement of the new rules it was proposed to allow a five years' period of 'grace' during which the diploma of 'surgeon-dentist' should continue to be granted by the Universities which complied with the conditions set forth in Clause 3, given above. The Milanese 'Sanitarians' have, however, protested against this as unnecessary, and as tending to perpetuate the abuse which it is sought to remedy.

THE Second Congress for the Study of Tuberculosis will be held at the end of July 1890, under the presidency of

Congress for the study of tuberculosis.

Professor Villemin. The following are the questions down for discussion:—1. Identity of tuberculosis in man with tuberculosis in the bovine species, fowls, and other animals. 2. Bacterial and morbid associations of tuberculosis. 3. Hospital provision for those suffering from tubercular disease. 4. Agents, not injurious to the organism, capable of destroying Koch's bacillus, from the point of view of the prophylaxis and treatment of human and animal tuberculosis. Those wishing to take part in the Congress are requested to send their names with a postal order for 20 francs to the Treasurer, G. Masson, 120 Boulevard St. Germain. Notice of communications should be sent to the General Secretary, Dr. L. H. Petit, 11 Rue Monge, Paris.

A medical strike.

DOCTORS in this country are loud in their complaints of the absurdly low scale of fees allowed to medical witnesses in courts of law. Their French brethren, however, appear to be still more hardly used. According to Professor Brouardel, a medical man on the other side of the Channel is expected to make a *post-mortem* examination, draw up a report, attend the assizes at the chief town of his department, stay there for two days and submit to be mentally vivisected *secundum artem* by bullying counsel, and all for what Mr. Montague Tigg would have called 'the ridiculously small sum' of 20 or 25 francs! Under these circumstances it is not surprising to hear that the practitioners of Rodez recently struck in a body and declined to make an autopsy in the case of a woman who had been murdered. They were fined 6 francs each by the judge, but lodged an appeal against the decision. Even if they have to pay, however, they will probably think their escape from a disagreeable and unremunerative duty cheap at the price.

Deaths of eminent medical men.

AN unusually large number of distinguished members of the medical profession have gone over *ad plures* during the last few weeks. In England we have lost Dr. Thomas King Chambers, who, though he had long retired from active practice, was up to the last a power in the land of medicine owing to his position on the General Medical Council. By his early associations, his education, and his intellectual tastes and character he belonged to the older race of scholarly physicians, now all but extinct, when medicine was still a learned profession. Dr. Chambers must have felt that the times were out of joint when even graduate doctors from the classic banks of the Cam and the Isis often cannot command sufficient 'dog' Latin to write the directions in a prescription in the orthodox form. The deceased physician will be chiefly remembered by his book on *Diet*, the style of which is as charming to the literary epicure as its precepts are comforting to the palate of the *gourmet*.—Dr. Habershon, who died soon after him, was one of those general physicians who illustrate, often much against their will, the modern tendency to specialisation. He was chiefly known, both to the profession and the public, as an authority on diseases of the stomach. Such cases formed the bulk of his practice, and it is a curious coincidence that he died of simple ulcer of the stomach, the complaint for which he was probably most consulted. He resigned his position as senior physician to Guy's Hospital at the time of the great trial of strength between the medical and the nursing staff.—The premature death of Walter Coulson deprived the medical profession in London of its richest and one of its most genial members. He inherited his wealth from his uncle, Mr. Coulson, who is said by those who know the inner history of the profession to have made more money by his practice than anyone during the last fifty years. Walter Coulson had the making of a really great surgeon in him had the *duris urgens in rebus egestas* compelled him to exert himself. As it was he was a skilful operator in cases of urethral and vesical disease and the guiding spirit of St. Peter's Hospital for Stone. He was one of the most generous of men, and his purse was always as open to his friends as his heart.—In Germany two men of light and leading have passed away, Rudolph Voltolini, of Breslau, and Max Leidesdorf, of Vienna. Voltolini was one of the pioneers of laryngology, and he may almost be called the Father of rhinology. He was an indefatigable worker, an impressive teacher in spite of a somewhat rustic appearance, a copious writer, and a fertile inventor of instruments (batteries, galvano-caustic appliances, palate hooks, &c.). He was one of the men who most helped to achieve for laryngology a position of scientific and professional *respectability*. Leidesdorf, who died on October 9, in the 70th year of his age, had devoted himself to the study of psychological medicine almost from the time of his taking his degree (in 1845). He qualified as Privat-Docent at Vienna in 1856, and was appointed extraordinary professor in 1866, and Chief Physician of the Lunatic Department of the Allgemeine Krankenhaus in 1872. He had great success as a teacher, and contributed largely to medical literature. He was undoubtedly one of the leading alienists in Europe, and was consulted as to the mental condition of Sultan Murad V. before his deposition. He also certified the insanity of the unhappy Ludwig of Bavaria. Leidesdorf was a man of great influence in his own school and in the Austrian profession generally.—In France, Dr. Duboué, well known for his researches and theories as to the mode of action of the rabic virus in hydrophobia, and Dr. Oré, professor of physiology at Bordeaux, author of important works on the transfusion of the blood, have recently died.—Belgium has lost Dr. Wasseige, Professor of Midwifery in the University of Liège, the inventor of a number of instruments much used in obstetrical practice.

Academic man-millinery.

THE Council of the Senate of the University of Cambridge have recently had before them the grave question of the proper academic raiment of Bachelors of Medicine. In future the official attire of holders of that degree is to consist of a black gown of the same shape as the scarlet gown worn by Doctors of Medicine, and a hood like unto that worn by Masters of Arts, but lined with pink instead of white silk. It is to be hoped that this 'purple and fine linen' will not turn the heads of the 'new-made baccaleres' in medicine.

Hospital accommodation for nurses and students.

IT has been decided to erect a ward for sick nurses and probationers in connection with Addenbrooke's Hospital, Cambridge. A private hospital for the accommodation of students suffering from illness has recently been established at Vienna; it contains forty beds. These are emphatically steps in the right direction, for nothing can be more miserable than the condition of hospital nurses when seized with acute disease; the authorities too often grudge them beds in the private rooms, and they have either to be 'warded' in the ordinary way, or to lie in their own lonely rooms far away from those who are supposed to attend them. Students are somewhat better treated, but accommodation is limited, and if there is a rush of cases the sick student feels that he is occupying the place that is meant for less fortunate sufferers.

THE old meeting-room of the Royal Medical and Chirurgical Society in Berners Street is in ruins, or rather, is undergoing reconstruction at the hands of an Electric Light Company. The Obstetrical Society met on Oct. 2 at its own library. But the Pathological and Clinical Societies have postponed their first meetings. The Royal Medical and Chirurgical Society will meet on Oct. 22 in a temporary meeting-room in their own premises at 20 Hanover Square. The permanent meeting-room will not yet be ready, and the library is in a yet more backward condition. The strike, and perhaps, optimism in certain estimates, account for the delay. The closure of the library is the most inconvenient feature in the present state of affairs. When matters are settled, and after all even two or three months' unexpected delay is little felt when it is past, the position of the four societies in Hanover Square will be of great convenience to the profession.

WE regret to say that a serious quarrel has broken out between the Council and Governors of the Royal Hospital for Diseases of the Chest, City Road. The secretary, Mr. Austin, has worked for many years to the satisfaction of at least many connected with the charity. He was recently accused, however, by the council, of spreading grave rumours concerning the admission and treatment of patients. He implied that cases were chiefly taken in for their scientific interest, and for therapeutic and surgical experiment. There was much talk about a case of tracheotomy that died; and more about Dr. W. H. White's and Mr. Pearce Gould's patient upon whom Moore's operation was performed for the relief of aortic aneurysm. It was said that thirty-two feet of steel wire were put into a man's body for 'experiment.' A statement of this kind is apt to mislead the charitable public, to the detriment of subscriptions, and therefore of patients. The medical staff addressed the chairman of the council by letter, requesting an investigation, and tendering their resignation, Dr. Hensley also explaining the truth concerning the cases. The council justified the action of the staff and called upon the secretary to resign, allowing him three months' grace. The governors took the part of that official, and maintained that he had acted in good faith, calling upon the council at a public meeting to reconsider the resignation of the secretary. This the council have refused to do, and the governors are dissatisfied. There appears to be no feeling against the staff. That governors should wish for more influence and control over the management of their hospital is natural, and that a council should prefer that matters be left in their hands for simplicity's sake is also only to be expected; hence, unfortunately, there are always latent or active elements of discord in every hospital.

UNDER the Indecent Advertisement Act, which comes into force on Jan. 1 next, a salutary check will be put upon the distribution of the disgusting leaflets which quacks have hitherto been permitted to sow broadcast with impunity in the public thoroughfare. The Act has been very carefully drawn, and, pending the discovery of flaws by the magistrates charged with administering the law, it would seem to cover every conceivable variety of this class of offence. It would, of course, be too sanguine to suppose that adventurers of this ilk will cease to pester our youthful population with their offers of service, but one or two convictions will doubtlessly lead to a careful revision of the text of their literary productions.

THE news of a death under nitrous oxide is calculated to cause a certain amount of apprehension among dentists and others who use the gas, and the public who avail themselves of its anæsthetic powers. It has always been considered to be practically unattended with risk, but even an isolated mishap is apt to undermine the confidence thus engendered. For these reasons it is to be hoped that a close inquiry will be made into the circumstances attending the death of Lady Milne, at Edinburgh, while undergoing a dental operation. It may after all be found possible to exonerate the gas from the charge of causing death, for nothing is more likely to injuriously affect an already weak heart than the emotion inseparable from the extraction of a tooth. When the balance of function is so delicately adjusted, a transient emotion will often suffice to determine a fatal syncope.

IN the *Birmingham Medical Review*, Dr. Purslow relates a case in which he was struck by the long time which elapsed before consciousness and reflex action returned after the administration of ether. The patient was a man, aged 34, who was operated upon for an enlargement of the gall bladder, which was opened and drained. He had suffered from jaundice for six months, and at the time of the operation the discoloration of the skin was very severe. The ether was given by a Clover's inhaler; the average time was taken before unconsciousness was produced. The operation lasted half an hour, and two ounces of ether were inhaled. The breathing and pulse remained slow and regular. After the inhalation ceased, half an hour elapsed before any conjunctival reflex was obtained, and more than three quarters of an hour before any reflex could be got by pinching the face. The author thinks that the presence of bile in the blood was the cause of the unusual length of time during which the nervous system remained under the influence of the anæsthetic.

LITERARY INTELLIGENCE.

Professor Weigert, of Frankfort, who, since the death of Dr. C. Friedländer, has been joint editor with Professor Unverricht, of Dorpat, of the *Fortschritte der Medicin*, resigned that post on October 1. His place has been taken by Professor Eberth.—A new medical journal, devoted to neurology and psychiatry, entitled *Revista de Neurologia e Psychiatria* has recently appeared in Portugal. The seventh volume of the *Realencyclopädie der gesammten Pharmacie*, extending from 'Mikrozymen' to 'Pepperette,' has recently been published by Urban & Schwarzenberg of Vienna.—An important work on Micro-organisms of the Mouth, from the pen of Professor Miller, will shortly appear. English and French translations will be published at the same time.—The first part of a new edition, the *Reichsmedicinal Kalender*, which owes its existence to the late Paul Börner, and is now edited by Dr. S. Guttmann, is announced to appear shortly. It forms a handy *vade mecum* of medical practice, besides containing much miscellaneous information of professional interest as to universities, medical societies, &c. The book is published by Georg Thieme of Leipzig.—Dr. Norman Kerr's work on Inebriety has been translated into Russian by Professor Kovalersky, of Kharkoff University.—An Italian work on Infective Surgical Diseases, by Dr. E. Tricomi, assistant to Professor Durante in the Royal Surgical Clinic at Rome, has recently been published by F. Vallardi. —A very interesting work on eye disease among the ancient Egyptians, from the pen of Georg Ebers, the famous Egyptologist, so well known for his historical romances which embody in attractive literary form the results of his severer studies, is announced for early publication. It is a translation of a papyrus of great antiquity, certainly not later than 1,500 years before Christ. It is therefore the oldest medical work in existence. In the technical parts of the work Ebers has had the advantage of the assistance of Professor Hirschberg, of Berlin, who has for many years taken special interest in the history of ophthalmology. The book will show that the Egyptians were well acquainted with many diseases of the eyes, such as chemosis, cloudiness of the cornea, chalky concretions of the Meibomian glands, leucoma, &c. The Egyptian doctors seem to have employed remedies which are still in use at the present day, such as zinc salts, and a mixture of alcohol and fennel, which, under the name of 'Romershausen's Essence,' is still sold in Germany as a specific for weak eyes.—A handy book for the use of practical bacteriologists, by Dr. H. Bernheim, has recently been published by A. Stüber, of Würzburg. It contains in a very small compass all the technical details, receipts, &c., for all kinds of bacteriological investigations taken *verbatim* from the original works of Koch, Flügge, Fraenkel, Hueppe, the *Annales de l'Institut Pasteur*, &c. The book is interleaved, so that new methods 'when found' may be at once 'made a note of.'—An *International Atlas of Rare Skin Diseases*, edited by Mr. Malcolm Morris (of London), Dr. Unna (of Hamburg), Dr. Leloir (of Lille), and Dr. Dühring (of Philadelphia), is published by Leopold Voss, of Hamburg.—Dr. Laurence Humphry, Assistant Physician to Addenbrooke's Hospital, Cambridge, and Lecturer to the Nurses in that Institution, has now in the press a *Manual of Medical Instruction for Nurses and Probationers*. It will be published by Messrs. Griffin.—Two authorities on gynæcological questions have brought out books since the summer vacation. The first volume has been issued of Mr. Lawson Tait's *Diseases of Women*, and Mr. Skene Keith has prepared a useful little *Introduction to the Treatment of Disease by Galvanism*.

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ARTICLE 2200.

MONTHLY MIRROR OF MEDICAL SCIENCES.

MEDICINE.

Forcible flexion of the body in locomotor ataxy.

AT the thirteenth Congress of the Italian Medical Association, recently held at Padua, Dr. P. Bonuzzi communicated the results of a number of experiments which he had made on the dead body with the view of ascertaining the physical effects produced on the spinal cord by suspension. These experiments led him to the following conclusions:—1. During suspension the spinal cord undergoes a marked change in its relations to the vertebral column, being displaced upwards to the extent of from 3 to 4 millimètres, this result being due to slight increase of the distance between the vertebræ owing to relaxation of the muscles and stretching of the vertebral ligaments. 2. The roots of the spinal nerves, with the exception of the cauda equina, do not seem to be appreciably stretched, although they are slightly altered in position. 3. The tension of the cerebrospinal fluid is increased. 4. During suspension the vertebral column is apparently lengthened to the extent of from 1½ to 3 centimètres, this elongation, however, being due more to separation of the spinous processes than of the bodies of the vertebræ. The body, as a whole, is lengthened to the extent of from 2 to 3 centimètres during suspension. Dr. Bonuzzi thinks that the good effect of suspension is due to mechanical pulling on the spinal cord through the cauda equina; this has a favourable influence on the circulation within the cord, whereby the irritating effect of the morbid process on the fibrillæ of the nerve-roots is lessened, and the function of any elements not yet destroyed is restored. In a second series of experiments Dr. Bonuzzi proved (to his own satisfaction) that by bending the body forcibly forward, so as to bring the knees into contact with the abdomen, the spinal cord and the cauda equina are subjected to very considerable stretching. Having made an opening into the vertebral column and inserted a needle perpendicularly to the long axis of the cord, he noted that on bending the body forcibly forward, the needle was carried downwards for a distance of from eight to twelve millimètres, the spinal cord itself becoming thinner and more resistent, and the cauda equina becoming extremely tense. Dr. Bonuzzi found that traction on the sciatic nerves stretched the cauda equina, but did not draw down the cord more than two millimètres. In forcible flexion the vertebral column undergoes an apparent lengthening of from six to fourteen centimètres. Dr. Bonuzzi also observed that as the body was bent forward a considerable amount of venous blood escaped from the opening into the vertebral canal, this result being due, according to him, to the pressure on the spinal veins caused by the forcible flexion of the body. The inference drawn from these experiments by Dr. Bonuzzi is that by forcible flexion all the therapeutical advantages of suspension can be obtained without its drawbacks. He has as yet only once had the opportunity of trying this method on the living subject, but in that case the results were very encouraging. The patient was a woman, who had had all the characteristic symptoms of locomotor ataxy in a very marked degree for nine years. Flexion was applied in the following manner: The woman lay on her back, and the legs were drawn up, by means of a towel twisted loosely round the ankles, till the knees touched the abdomen; she was kept in this position at first for half a minute and then for gradually lengthening periods up to three minutes. The treatment was applied on alternate days, forcible flexion being carried out two or three times on each occasion. After three sittings the lightning pains became less severe, and after eight sittings they almost entirely ceased. The power of locomotion was so far regained that the woman was able to carry a bucketful of water from room to room, a thing she had not been able to do for three years. She could also stand with her eyes shut for half a minute without falling. The irregularity of the pupils and the absence of knee-jerk remained as before. In other respects improvement was progressive and lasting.

Mechanical treatment of locomotor ataxy.

Professor Th. von Jürgensen, of Tübingen, describes* a mechanical mode of treatment which has been used for the last fifteen years by Friedrich Hessing, a well-known German 'orthopædist,' of the good effects of which the Professor has himself been a witness. Testimony of this kind is the more striking from its rarity, as medical men are, as a rule, by no means too ready to acknowledge that any good can come out of the Nazareth of 'unqualified,' practice. According to Professor von Jürgensen, the stretching of the vertebral column and the consequent improvement in the spinal circulation are the essential therapeutic features in suspension, and are obtained just as effectually and with less trouble by an accurately fitting supporting 'jacket.' The latter has the immeasurable advantage of being permanent instead of being applied for a minute or two at longer or shorter intervals of time. The object of the apparatus is to relieve the spine of the pressure of the upper part of the body and to fix it in the extended position. The 'jacket' has not only to be applied with the nicest precision of adaptation to each individual case, but the patient must be closely watched and the necessary changes in the apparatus made as he gains flesh, &c. In advanced cases a year's treatment is usually necessary; in slighter cases less time will be required. Hessing insists on having the patients in his establishment under his own eyes during all the time they are under treatment. According to Professor von Jürgensen the order in which the various symptoms subside is tolerably regular. The vesical and rectal troubles are first relieved; a little later the lightning pains and paræsthesiæ disappear; next improvement is noticed in the eye symptoms. Lastly, the power of walking is regained, but, as a rule, this does not take place till several months have elapsed. The improvement in digestion and in the capacity of taking exercise, together with the recovery of the power of sleep, lead to great amelioration of the general health. To the suggestion that these good results may be due to spontaneous subsidence or remission of the morbid process, Professor von Jürgensen replies that the effects are too uniform to admit of this explanation.

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* *Deutsche med. Wochensch.*, No. 40.

Pereirine as an adjuvant to quinine in malaria.

It is well known that in certain cases of malaria quinine seems to fail of its specific effect; the dose is steadily increased without any apparent effect on the disease, but frequently with only too obvious results on the heart and nervous system. The depression thus caused intensifies the adynamic condition caused by the fever, and the patient finally dies of exhaustion from what a poetical pathologist has called 'febrile autophagism.' In such cases digitalis combined with quinine is often useful, but, according to Dr. F. Tibiriçá,* pereirine (an extract of *Pao pereira* bark) meets the indications far more satisfactorily. He says it doubles the therapeutic activity of quinine, whilst at the same time preventing the untoward effects frequently produced when the drug is pushed. Pereirine, according to Dr. Tibiriçá, has no depressant action on the heart, and, as he somewhat epigrammatically sums up the case, 'ten decigrammes of quinine with ten decigrammes of pereirine are equal (in malaria) to twenty decigrammes of quinine,' without the disadvantages of such a dose of the latter drug. He relates the case of an old woman of 80, suffering from organic disease of the heart, and reduced almost to the last extremity of exhaustion by intermittent fever; quinine in considerable doses had no effect, but the temperature was brought down almost at once to the normal standard, and the appetite and strength speedily returned when pereirine was combined with the quinine. In several other cases Dr. Tibiriçá found the same plan of treatment equally successful.

Administration of drugs by electricity.

Dr. James Cagney described before the Harveian Society on November 7 a method of passing certain drugs through animal tissues between the poles of a galvanic current. He had used iodide of potassium in this manner, but only very small doses could be administered through the skin. The method was best adapted for the treatment of diseases of the skin and mucous membranes, or of small tumours immediately beneath them. A very strong current was not needed, but a sufficient current-density was required, and the tissues under treatment must be brought directly in the path of the current. The electrodes might either be sponges holding a solution of iodide of potassium, or a modification of Dubois's conducting tubes filled with the fluid. For the treatment of mucous surfaces an electrode might be made of a glass tube, which could be filled with fluid, having a zinc wire introduced through the bottom, and the mouth (which might be cut to any desired curve) blocked with a fine sponge. This was connected by means of the zinc wire with one pole of a galvanic battery. The fluid should be a saturated solution of iodide of potassium, and it should be supplied where possible at both poles, or, if not, at the negative one. The current should be passed for ten to fifteen minutes; its direction should be reversed every minute. The indications for the method were those for the local use of iodine and iodide of potassium. It was useful in syphilitic affections of the throat, in labyrinthine deafness, in chronic pharyngitis, in indolent ulcer, lupus and acne, in enlarged strumous glands, bronchocele, exophthalmic goître, &c. This new method evidently deserves careful trial. It may be the eve of a new departure in local medication, and may possibly bring us within measurable distance of Professor Huxley's therapeutical millennium, when, to use the words of that distinguished biologist, it will be 'possible to introduce into the economy a molecular mechanism which, like a very cunningly-contrived torpedo, shall find its way to some particular group of living elements and cause an explosion among them, leaving the rest untouched.'*

SURGERY.

Excision of larynx for cancer.

As the formidable operation of laryngectomy is still on its trial, it is important that the results, immediate and remote, of every case should be duly reported. The following case is especially interesting and valuable, because it was under the eye of the surgeon from the date of operation till the patient's death several months later. The case is related at great length by the operator, Dr. Edoardo Boccomini, surgeon to the Ospedale Maggiore, at Milan.† The patient, a man aged 54, noticed in August 1887 that his voice was hoarse, but, as he suffered no pain or inconvenience of any kind, he paid no attention to this. The hoarseness steadily increased, and as his voice was reduced to a whisper and he was troubled with a dry incessant cough, he consulted the well-known laryngologist, Professor Labus, on March 12, 1888. At that time the right ventricular band and vocal cord were seen to be occupied by a reddish-white growth which was pronounced to be epithelial cancer. The patient was admitted to the hospital on Sept. 27, 1888, suffering from difficulty of breathing, and commencing dysphagia. Tracheotomy had to be performed on the following day, and it having been found that the disease had extended to the anterior commissure of the vocal cords, and that the growth touched the opposite side of the larynx, it was determined to excise the whole of that organ. The operation, which was performed on Oct. 25, occupied one hour and five minutes. The patient bore it well, and his condition was most satisfactory up to the seventh day, when he complained of pain in the chest and epigastrium. This ceased at once on the removal of the œsophageal tube which had been inserted at the time of the operation, and it was then found that he could swallow milk and broth without much difficulty. On the tenth day the wound above the hyoid bone was healed, and the lower part was almost closed. On the eighteenth day the patient was able to swallow solid food. On the twenty-seventh day the whole wound was soundly healed, with the exception of a minute fistulous opening leading into the pharynx. There was no swelling or induration in the neck and no trace of recurrence of the disease in the throat. Though anxious to return home, the patient was induced to stay in hospital so as to be under observation and under better conditions of living than he would have been outside. For some months his health, both general and local, continued excellent; he ate ordinary diet 'with voracious appetite,' and even learnt to speak (of course aphonically) so as to make himself understood at a certain distance. About the middle of February 1889 he began to complain of pain in the right side of the neck, and of difficulty in swallowing; the latter symptom gradually increased to such a degree that liquids could only be got down slowly and with much effort. A hard swelling appeared just above the right sterno-clavicular articulation, which rapidly extended upwards between the right sterno-mastoid muscle and the cicatrix of the operation wound. The latter also became the seat of fungating growths, and death took place on April 19, five months and twenty-four days after the operation. After removal the disease was found to be medullary carcinoma. Dr. Boccomini is inclined to blame himself for not having removed a piece of growth through the mouth for microscopic examination before operating, but probably most surgeons will think the chief cause for regret to be that in a case in which, as the event showed, the conditions were so favourable, the operation was not performed as soon as the malignant nature of the disease was recognised.

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* *Revista Medica de S. Paulo*, No. 4.

* 'The Connection of the Biological Sciences with Medicine.' *Science and Culture*. London: 1881. P. 348.

† *Gazzetta Medica Lombarda*, Oct. 12 and 19.

Successful removal of a knife from the bladder.

At a recent meeting of the National Academy of Medicine of Mexico,* Dr. Lavista related the following case. A man about 35 years of age received a stab in the abdomen which penetrated the bladder. The man, who was on horseback at the time, made the animal rear when he felt himself wounded, and the blade of the knife was broken over the pubic bone, one of the fragments (93 millimètres long) falling into the bladder, where it remained for two years and a half. The wound gradually closed, but the foreign body set up severe cystitis, and from the time of the injury the patient was never able to hold his body quite straight—it was always bent a little forward. He suffered such incessant pain that he could hardly sleep, and he became greatly emaciated. Calculus having been diagnosed, lithotrity was attempted, but it was found impossible to crush the stone. An exploratory opening was then made through the perineum, when the knife was discovered 'placed like a bridge between the two walls—anterior and posterior—of the bladder, directed obliquely downwards and backwards, the edge being undermost.' It was so immovably fixed in this position that it was impossible to remove it through the perineum. Suprapubic cystotomy was then performed, an incision ten centimètres in length being made. Even this was not sufficient, and the wound had to be enlarged. The knife was at last got out, and then the fragments of a large stone, which had distended the bladder, and in this manner had prevented the point of the knife from penetrating its wall, were removed. The walls of the bladder were ulcerated and covered with vegetations. After scraping the mucous membrane, the wound of the bladder-wall was accurately sutured, provision being made for drainage both above the pubes and through the perineum. 'Healing was almost immediate, no untoward circumstance occurred, and the course of the case has been of the happiest.' One hardly knows which most to admire in this extraordinary case, the skill of the surgeon or the phenomenal endurance of the patient.

A new antiseptic dressing.

At a meeting of the Medical Society of London on Nov. 4, Sir Joseph Lister described a new antiseptic dressing which he said he had now used for a year in his wards at King's College Hospital with excellent results. He recommended the new dressing as the most satisfactory that he had hitherto met with. Sir Joseph pointed out that though sal alembroth had been largely used in surgical practice in consequence of his supposed preference for it, its employment had never received his 'published sanction.' It had the disadvantage of being so excessively soluble that it was washed out of the dressings with the greatest ease by the discharges, so that there was always the risk, if the wound discharged freely, that the antiseptic would be altogether washed away, even if large masses of gauze were used. Further, the discharge in taking up the sal alembroth formed an intensely irritating solution, which produced crops of pustules and even large blisters near the edge of the dressings. In describing the numerous experiments he had carried out with the object of finding a better antiseptic, Sir Joseph Lister said that the real point to determine as to any given agent was not whether it would kill germs, but whether it would prevent the development of organisms. Mr. Martindale called his attention in February 1886 to cyanide of mercury as a substance which might prove to be a valuable antiseptic, one, too, possessing the advantage of not coagulating albumen. Sir Joseph Lister found that this substance had a remarkable inhibitory power over the growth of organisms, but it had the drawback of being highly irritating. A double cyanide of mercury and zinc, formed by mixing together a solution of the double cyanide of mercury and potassium with a soluble salt of zinc, the zinc taking the place of the potassium, was then tried, with the result that it was found to possess most important antiseptic properties. In the proportion of 1-5000th part it kept blood-serum perfectly free from the development of organisms for eighteen days in spite of potent septic inoculation. Dressings were then prepared by diffusing this 'zinco-cyanide of mercury' in water with a little glycerine added to fix it and prevent it from dusting out. In view of the very slight solubility of the double cyanide in serum, some of the very soluble cyanide of mercury was associated with it. Some admirable results were got with this 'cyanide gauze,' but it was found to cause irritation of a peculiar kind, and suppurations also sometimes occurred at a late period of the case, such as Sir Joseph had never been accustomed to with carbolic dressings. It was found that this could be prevented by first saturating the gauze with the double cyanide and then putting it into a solution of starch. This fixed the particles of the cyanide most effectually in the gauze. Subsequently the double cyanide and starch were prepared with sulphate of potash; in this way the mixed salts could be powdered and easily diffused in water. This compound should be moistened before use with a 1-4000th solution of sublimate, so as to destroy any organisms there might be in the dressing. The layer destined to be put next the skin is washed in a solution of carbolic acid; this washes out the sublimate. By this means Sir Joseph Lister said he had obtained perfect results in practice in wounds of every description.

Surgical treatment of gener paralysis.

The progress of the healing art at present is decidedly in the direction of the gradual annexation by surgery of territory formerly supposed to belong exclusively to medicine. Trephining, which not so long ago was almost proscribed, except as a last resource, is now done with a 'light heart' for epilepsy, cerebral abscess, tumour, &c. The last step forward in the direction indicated is described by Dr. T. Claye Shaw.* Starting from the basis that in general paralysis the pathological appearances point to irritative (probably inflammatory) processes in the upper layers of the cerebral convolutions in the earlier stages, and to pressure signs from the presence of fluid in the later ones, Dr. Claye Shaw conceived the idea of relieving the pressure by mechanical means rather than by depletion by means of drugs. He argued that if nerve-stretching was beneficial in ataxy, expansion of the brain by taking off pressure from its substance ought *à priori* to be equally useful under the condition of increased arterial tension which is one of the early phenomena in general paralysis. The later symptoms which are directly due to fluid pressure, such as the paralyses, attacks of stupidity, loss of power of swallowing, of talking, &c., would also be relieved by trephining. Dr. Claye Shaw relates the case of a patient who was rapidly approaching a condition of dementia of the paralytic form, and who was probably suffering from a bulbar lesion, with indications that the mischief was extending to the superficial parts of the brain. He was trephined by Mr. Harrison Cripps on the right side of the skull over the central sulcus and about two inches outside the longitudinal fissure. Two holes were made with a trephine, and the intermediate bone was cut away so as to make an opening about 1½ inch long by ¾ inch wide, cutting away the dura mater and letting out a considerable quantity of subarachnoid fluid. By the tenth day healing was complete and the patient was able to sit out of bed. With the exception of a little tingling in the fingers of the left hand on two days, there have been no cerebral symptoms since the operation. The man is no longer insane, and is about to be discharged from the asylum. There is no marked improvement in the bulbar symptoms, though even these have been benefited to some extent, but in his mental tone the amelioration is most marked, and altogether Dr. Claye Shaw thinks the result in this case fully justifies the operation.

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* *Medicina Practica*, Oct. 23.

* *British Medical Journal*, Nov. 16.

OBSTETRICS AND GYNÆCOLOGY.

Hypnotic suggestion as an oxytocic.

Dr. S. R. Cajal, Professor in the Medical Faculty of Barcelona, has recently reported a case [*] in which he found hypnotic suggestion a most effectual means of hastening labour while rendering it practically painless. The patient was a robust, 'by no means nervous' woman who had already had five children. All her confinements had been tedious and she was looking forward with anxiety to the sixth, which was impending. She had a few months before been the subject of some hypnotic experiments, and she was easily put to sleep by simple suggestion. Ten days before labour was due, Dr. Cajal suggested to her during hypnotic sleep that she should have a 'quick time,' and that the uterine contractions, though rapid and powerful, would be all but painless. His prophecy, or rather his command, was fulfilled; in due course the 'niggling' pains set in and lasted for some hours, without preventing the patient from attending to her domestic duties; in the evening labour came on in earnest, and within half an hour the os became dilated, the membranes ruptured, and the child was born to the great surprise of the mother, who could hardly believe that it was all over. Even when the expulsive pains were at their height the patient was drowsy, and after the head was born she was with difficulty kept awake. This somnolence, according to Dr. Cajal, is an almost constant occurrence when a 'suggestion' is being acted on, and is a sign that the subject is under the influence of hypnotism. Half an hour after delivery the woman begged to be given something to eat. Convalescence was uninterrupted, and was relatively almost as speedy as the confinement. She got up on the fifth day and attended to her household duties, and in a fortnight from the date of her lying-in she was well. Dr. Cajal says that the patient felt nothing of the agonising pain of childbirth, nor of the depressing mental anxiety almost invariably present at that time. When the pain should have been most severe—*i.e.* at the passage of the fœtal head through the os—she felt nothing more than a sense of muscular fatigue. It seemed, according to Dr. Cajal, as if the nerves of pain were paralysed, while the functional activity of those conveying tactile impressions and the 'muscular sense' to the sensorium was quite unaffected. He suggests that delivery might possibly be accomplished during hypnotic sleep.

Antipyrin in labour.

Strong testimony to the value of antipyrin in mitigating the pains of labour is borne by Professor Paolo Negri, Director of the Obstetrical Clinique at Venice.[*] He says that his experience, based on a very large number of cases, enables him to affirm positively—1, that antipyrin used during parturition has never in his hands produced any ill effect whatever; 2, that in the majority of cases it was of great use, so much so that in his clinic antipyrin has now for several months past replaced every other drug ordinarily employed to relieve the pain of uterine contraction during labour.

DISEASES OF CHILDREN.

Significance of patency of the posterior fontanelle.

Dr. Gonzalez Alvarez records [†] the result of observations made by him on new-born infants in the Inclusa Hospital at Madrid, with the view of ascertaining the relative frequency of patency of the posterior fontanelle at birth. Of 300 babies examined immediately after birth, only 38, or 12·66 per cent., had the posterior fontanelle open. Dr. Alvarez endeavoured to ascertain whether the condition was connected with want of development in other parts, with feebleness of constitution, or with disease, but was unable to discover any such relation. If, however, the fontanelle remains unossified beyond the second month after birth, the child is either ill or badly nourished.

ARTICLE 2201.

MORRISON ON THE LOCALISATION OF INTRACRANIAL LESIONS.[‡]

In this paper the author gives a short historical retrospect, an outline of the localisation of functions (motory and sensory) in the brain, preceded by an anatomical sketch of the convolutions, an 'estimation of localising symptoms,' and lastly, 'fallacies in diagnosis.' Wood-cut illustrations accompany the text. The following is stated under the heading 'Sensory centres.'

1. *Vision.*—The leading authorities are not yet harmonious in their localisation of the visual centre.

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[*] *Medicina Practica*, No. 87.

[*] *Annali di Ostetricia e Ginecologia*, 1889, No. 8.

[†] *Medicina Practica*, Oct. 19.

[‡] Morrison, J. T.—On the Localisation of Intracranial Lesions (*Birmingham Med. Review*, April 1889.

Ferrier found that electrical stimulation of the angular gyrus caused a movement of the eyes to the opposite side, suggestive of a visual sensation, for the mere fact of movement following stimulation of an area is not of necessity a proof that the region is a motor one; and it therefore becomes necessary to perform the complementary experiment of destruction of the given area. In Ferrier's hands the result of ablation or cauterisation of either angular gyrus in the monkey was invariably the production of a temporary loss of vision of the opposite eye. If the functional eye were bound up, the animal gave unequivocal evidence of being quite blind. Usually, however, recovery ensued in the course of a few hours. Gerald Yeo entirely corroborates this observation. Similarly, bilateral decauterisation of the angular gyrus caused a temporary total blindness, the animal being in complete possession of all its other faculties. It is manifest, therefore, that the whole of the visual centre does not reside in this region, though Ferrier was at first disposed so to locate it. His subsequent investigations in the occipital region have thrown considerable light upon this point. He found that almost complete removal of both occipital lobes caused no appreciable impairment of vision. As it is indubitable that the occipital lobes are concerned in the sense of sight, this is a remarkable fact; and it has been confirmed by Gerald Yeo, and by Horsley and Schäfer. Recent experiments by Schäfer conflict with those above described, but agree with the statements of Munk that lesion of one occipital lobe causes hemianopia towards the opposite side, and that bilateral lesion causes complete blindness. Ferrier further found that total blindness did not result from any cortical mutilation, short of destruction of both angular gyri and both occipital lobes. Munk denies that the angular gyrus has any concern in vision, though his described observations hardly support this view; for after destruction of the left angular gyrus, the brusque approximation of a finger to the right eye only caused winking when the eyelids were actually touched. Clinical and pathological data in man are not sufficiently abundant and precise for a final determination of these points to be made at present. On the one hand there are on record cases in which crossed amblyopia with disease involved one angular gyrus, as in Starkey's case, published in the *Medico-Chirurgical Transactions* for 1884. Whilst, on the other hand, complete hemianopia has been recorded in disease of the occipital lobe and especially of the cuneus; and absolute blindness has been alleged by Gowers to be a consequence of successive lesions in the two occipital lobes. Ferrier suggests that hemianopia, divided exactly by a line passing through the fixation point is more probably due to lesion of the optic tract; and when the dividing line swerves towards the defective side the probabilities are in favour of a cerebral lesion.

2. *Hearing.*—Stimulation of the superior temporo-sphenoidal convolution caused a movement suggestive of an auditory sensation on the opposite side—*i.e.* pricking of the ear, and turning of the head and eyes, with dilatation of the pupils. Identical movements are evoked by a loud and unexpected noise. Mutilation limited to the cortex of this convolution was followed by marked indications of deafness in the opposite ear. Symmetrical ablation caused total and permanent deafness. Pathology lends strong support to the inductions drawn from experiment. The auditory centre has therefore by general consent been localised in the posterior half of the first temporo-sphenoidal convolution. This region has been found atrophied in cases of congenital deafness, and lesion of it has been accompanied by loss of hearing in the opposite ear. It is interesting to observe that sooner or later hearing has been regained in such cases. doubtless owing to functional compensation effected by the uninjured centre in the other hemisphere. Dr. Gowers mentions two cases of tumour involving the superior temporo-sphenoidal convolution, in which convulsions were ushered in by hallucinations of hearing.

3. *Smell.*—A study of the comparative anatomy of the olfactory bulb and rhinencephalon points to the hippocampal lobule (*uncus*) as the cerebral organ of smell, its variations of size in different animals corresponding to differences in the development of the sense. Electrical stimulation affords strong confirmation, yielding a reaction identical with what occurs when a pungent odour is applied to the nostril—viz., torsion of the nostril and lip on the same side; in this last respect the experiment furnishes the only exception to the rule of opposite-sided movements. The evidence of pathology is corroborative—*e.g.* epileptic fits beginning with an olfactory aura occurred in association with softening of the anterior extremity of the uncinate convolution. It would further appear that, in man at least, some fibres of the path reach the opposite hemisphere, since, according to Gowers, 'the sense of smell has been affected, together with the other special senses on the same side, by disease of the posterior part of the opposite internal capsule, and also by disease of the cortex.'

4. *Touch.*—Can a tactile centre be localised? Most authorities agree that it can, but there is great discrepancy as to the regions assigned. Ferrier and Horsley advance cogent experimental proof for allocating the centres in the opposite hippocampal region and gyrus fornicatus, the two together constituting the falciform lobe of Broca. Reasons have also been assigned for localising the centre under consideration in the so-called motor zone, but the arguments for this hypothesis are far from conclusive.

In the final part of the paper the *fallacies in diagnosis* are thus treated. 'It remains to point out certain fallacies which are liable to enter into our interpretation of the phenomena of encephalic lesions. It is not too much to say that no other department of our profession more severely taxes the resources of the diagnostician. Many cases, indeed, present perplexities which baffle the most acute investigation, and in such we must be content, in the existing state of knowledge, to make an approximate diagnosis. *a.* The symptoms may be indirect, *i.e.* due to a lesion remote from the part whose function is disturbed. This may be produced in one of the following ways:—(1) Pressure, acting mechanically through a distance; (2) blocking of a nutrient vessel of the cortex by a tumour or other lesion at the base; (3) interruption of fibres connecting associated centres, as in the sensori-motor nexus of the speech apparatus. *b.* Reflex spasm, closely simulating central disease, may be met with. Monospasm, and even unilateral convulsions, have been caused by peripheral sources of irritation. A fibroma involving a nerve-trunk in a palm produced fits of typically Jacksonian character, cure being effected by removal of the growth. The case is recorded by Mills, of Philadelphia (*New York Med. Record*, September 22, 1888). *c.* A fallacy of rare occurrence is the existence of a cerebral lesion on the same side as the paralysis. This is not of any great practical importance, but still needs to be borne in mind. It is explained by non-decussation of the pyramidal tract in the medulla, an anatomical abnormality which has been reported by Flechsig and others. *d.* There may be multiple discrete lesions, though the symptoms are explicable on the hypothesis of a solitary and definitely located lesion. *e.* Hysteria and allied functional neuroses give rise to symptoms closely simulating the effects of coarse morbid processes. In the case of women, and especially where operation is contemplated, scrupulous care requires to be taken to eliminate this possible fallacy. *f.* Ocular defects, as hypermetropia, myopia, and astigmatism are apt to produce. in addition to imperfect vision, headache, and even vomiting. There may then, in such cases, be a superficial resemblance to the phenomena of cerebral tumour. *g.* Menière's disease, with its associated tinnitus, deafness, vertigo, and vomiting, is liable to be mistaken for lesion of the temporo-sphenoidal lobe, though actually due only to disturbance of the labyrinth. *h.* Anæmia, uræmia, also plumbism, and other metallic poisonings, may be mistaken for intracranial disease. *i.* Lastly, it is well to remember that extensive mischief may exist without furnishing objective symptoms. In this class are included tumours of the frontal and occipital lobes and of the cerebellum; generally of a soft, succulent nature, and forming so slowly that the nervous tissues are able to adapt themselves to the displacement, or pressure is relieved by thinning of the skull. Broadbent's hypothesis of the bilateral representation in the hemispheres of one-sided movements which are habitually associated on the two sides, serves to explain why certain focal lesions elude localisation, the uninjured centre compensating for the lost function of its fellow.' E. J. Edwardes, M.D.

Article 2202.

WASSERMANN ON EXTIRPATION OF THE LARYNX.

Dr. Wassermann, of Heidelberg, has recently published (*Deutsche Zeitschrift für Chirurgie*, Band 29, Heft 5 and 6) the results of an endeavour to arrive at definite conclusions as to the indications, risks, and general value of operative interference for the removal of new growths from the larynx. With this object in view the author has tabulated all the cases of complete or partial removal that have been recorded since Dr. P. Heron Watson first performed extirpation of the larynx in 1866. These tables which are preceded by three previously unpublished cases in which partial excision was performed by Professor Czerny, show that the danger of the operation itself has much diminished of late years in consequence of improved methods of dressing, and of increased experience. Whilst before 1881 the mortality in the course of the first two months after extirpation of the larynx was 60 per cent., it has since that year fallen to almost 36 per cent. In considering the most suitable methods of operative treatment in the different forms of cancer and other new growths of the larynx, Dr. Wassermann, following very closely the rules suggested by Dr. Schech, of Munich, at the International Medical Congress of 1881, holds that total extirpation is indicated in such cases only of malignant disease in which a less serious operation is no longer applicable, and in which the growth is confined to the interior of the larynx, and has not given rise to the development of metastatic growths in distant organs. It is also indicated in cases of enlargement of the cartilages of the larynx, whether due to new growths or chronic inflammatory changes, in which deglutition is much interfered with, and it is found difficult to maintain life by injections either through the stomach-tube or *per anum*. On the other hand, total removal is contra-indicated by advanced age. The author would lay it down as a rule that no patient be submitted to such operation after the age of sixty. The operation should not be performed or should certainly be postponed in the presence of any inflammatory complication in the respiratory organs, such as bronchitis or pulmonary catarrh. The complete removal of the larynx is further contra-indicated in cases of perichondritis and of necroses of the cartilage which can usually be treated by the endo-laryngeal operation or by partial excision, in all cases of non-malignant growths, in cases of syphilitic disease which is almost always amenable to medicinal treatment, and in cases of tubercular ulceration, which are best treated by tracheotomy. Partial excision of the larynx is held to be indicated in cases of malignant new growths of closely circumscribed origin and limited extent, in which a partial removal of the cartilaginous framework can be effected with prospects of success, and also in cases of extreme unyielding annular stenosis. In cases in which this stenosis is of a yielding nature, and thus favourable for treatment by gradual dilatation, intubation, and other methods, the operation is contra-indicated, as also in instances of benign growths even though these may be relapsing. The author's tables show that of 118 cases of total excision of the larynx for cancer, 53 proved fatal from the results of the operation itself, death having been caused in 10 instances by collapse and in 28 by pneumonia, and that 8 patients only were reported as being quite well three years from the date of the removal of the disease. Of 50 patients who had been treated by partial excision for cancer 22 died within two months from the date of operation, 11 suffered from relapse, and 4 only were supposed to have been permanently cured.

In his concluding comments Dr. Wassermann insists on the importance of a speedy and very careful examination in every case of suspected laryngeal growth, in order that a diagnosis may be established without delay. In every doubtful case an anti-syphilitic treatment should be tried, and the expectorated matter be examined for tubercle-bacilli. A portion of the growth should be removed by a minor endolaryngeal operation for microscopical examination, and then if the diagnosis of malignant disease be well established and the growth still of limited extent, the surgeon should endeavour to remove this by the endolaryngeal operation. He should not, however, pursue this method too far, but when convinced of the impossibility of thus radically removing the disease, should have recourse to laryngo-fissure with partial or total excision of the larynx according to circumstances. The sooner extirpation of a cancerous larynx is performed, the better, it is held, are the prospects of a radical and permanent cure. The author seems to favour extirpation of the larynx in cases of cancer, even as a means of affording some relief and temporary freedom from disease, and also some hope to the patient who, if nothing be done for its removal, must feel convinced that he is doomed to suffer from a terribly painful affection which can be relieved only by death. W. JOHNSON SMITH.

ARTICLE 2203.

DUFOURNIER ON THE DANGERS OF COCAINE.

IN the *Archives Générales de Médecine* for October 1889, it is pointed out by M. Dufournier of Paris, that cocaine, though a valuable anæsthetic in surgical operations, and less dangerous in this respect than chloroform, may give rise to serious symptoms which ought not to be ignored. The following are the more alarming of the symptoms which may be caused by the action of an excessive or poisonous dose of cocaine; pallor of the face, cold perspiration, accelerated pulsation of the heart, frequent and shallow respiration, dilatation of the pupil, precordial oppression, vertigo, nausea, vomiting, partial loss of consciousness with a dread of approaching death, in short, symptoms of collapse with a tendency to become associated with coma. In some very marked and severe cases, the above-mentioned symptoms pass into partial or generalised convulsions, associated with the ordinary results of convulsive attacks, such as cyanosis of the face, dyspnœa, small pulse, and death. Instances have also been recorded of psychical disturbances, as cerebral agitation and mental excitement, and even of mania having followed the subcutaneous injection of solutions of cocaine. The results of cocaine poisoning vary in different cases; sometimes one group of symptoms is observed, at other times another and different group. In some instances the symptoms are not so severe, and yield readily to suitable treatment in the course of a few minutes, whilst in others they are more alarming, and may affect the organism for several days. In some patients a small dose will cause serious symptoms, whilst in others a much larger quantity may be injected without any bad results. According to Hœnel, the quantity of cocaine in an hypodermic injection should not exceed ½ gr. In whatever form it be used, whether by injection or inhalation, or simple application to a mucous surface, and whatever be the region of the body to which it may be applied, cocaine may give rise to bad symptoms. It is very probably true, as has been declared by Wolfler of Gratz, that these bad results occur more frequently after injections in the region of the head and face, but still very alarming, and even fatal symptoms have followed the bold use of cocaine in other parts of the body. Neither age nor sex seems to play any part in the predisposition to cocaine poisoning. In the opinion of some who have studied this subject, there is a greater susceptibility in old and debilitated subjects, and in those affected with renal disease. Much attention has been directed to the supposed influence of the patients' posture in the action of cocaine. As may be readily understood, symptoms of cerebral anæmia are more likely to occur in the sitting than in the recumbent posture. The author has applied with much success in the surgical practice of Professor Blum a dose midway between the small dose of Hœnel (½ gr.), and the large one of Reclus (3 grs.). In conclusion it is stated that the best treatment in cases of suddenly developed poisoning from cocaine consists in the administration of some alcoholic drink, or of coffee, and in revulsion on the cardiac region. Inhalation of nitrate of amyl, and administration of cafeine, have also been recommended. In cases of convulsions from the action of cocaine, inhalations of chloroform may be given with good results.

W. JOHNSON SMITH.

ARTICLE 2204.

WOLZENDORFF ON MASSAGE.

THE following is from a paper by Dr. Wolzendorff, of Wiesbaden, in the *Meditz.-Chirurg. Centralbl.* Abdominal massage is most frequently applied in cases of habitual constipation. The first point to be decided is whether there are atonic or spastic conditions of the intestine or abdominal integuments. For spastic contractions would require a very gentle treatment; above all things gentle regular stroking, while atonia demands more rigorous treatment. The latter condition is, according to Wolzendorff's experience, the more frequent; and Reibmeyer's five methods seem exclusively adapted to such cases. With the points of the three long fingers he strokes in circles round the navel, increasing the pressure; and if the patient cannot bear this, he strokes with the palm of the hand well bent back. These two methods are meant to stimulate the peristaltic contractions. The other methods aim at setting the fæces in motion. Thus, by putting the hands beneath the cæcum, and pressing heavily along the course of the large intestine, the fæces are pushed forward. The next method is the complete working through and kneading of the belly in every direction, backwards and forwards. Particularly effective are short blows at about one minute's interval. Huenerfauth used to make from thirty to forty strokes with one hand laid upon the other from left to right, say from the spleen to the liver, and then as many in the opposite direction. These strokes are very gentle at first, and gradually increase in force, and reach backwards each time by half a hand-breadth. Hereupon follow kneading and slapping (*klatschung*) upwards and downwards from side to side. This method is of great value in flatulence. Sahli recommends costive subjects who cannot obtain massage treatment to place a five-pound cannon-ball upon the stomach and roll it about themselves. Exercise in the open air, gymnastics, cold sitz baths, and the damp body-bandages are recommended as supplementary to the massage treatment.

Wolzendorff considers that in chronic metritis and parametritis massage treatment, and particularly Brandt's method of altering the position of the uterus, is for practical purposes too circumstantial. Von Preussen has simplified Brandt's method, the chief value of which appears to be the strengthening of the levator ani by the adduction movements of the thigh. These movements, which the patient performs in the lithotomy position, the doctor resisting, cause a contraction of the muscles of the pelvic basis, particularly of the levator ani. The contractor levator narrows the vagina at the point where the latter passes through it, and thus hinders the further recession of the anteflected uterus. This treatment is of no avail if the uterus has sunk backwards. The question is whether Von Preussen's theory is correct. It is at any rate curious that a quack's method should be so highly valued by an eminent gynæcologist.

We may at once assume that exudations and infiltrations in the female pelvis will be as favourably affected by massage as other exudations, supposing, that is, that they are at all suited to such treatment. In parametritis, and particularly in the resulting conditions, the greatest care must be taken not to cause a renewal of inflammation.

Similarly in perityphlitis, Wolzendorff has seen a very difficult case, in which careful massage was continued for a long time combined with salt baths and damp warm bandages. There was a diffuse infiltration, which had remained for years after repeated attacks of typhlitis stercoralis, and rendered life miserable; yet in the end the above-named treatment effected a complete cure.

In writer's cramp the patient is not allowed to try to write. The muscles of the forearm and hand, especially the interossei and lumbricales, are gently stroked and kneaded, and passive and active movements performed. This suffices for slight cases, and the general practitioner can undertake such, but obstinate cases must be left to the specialist. Similarly with other professional neuroses. Gentle stroking gives great relief in cramp of the calf of the leg. The very considerable effect of massage on the nervous system deserves notice. We cannot define in what the effect consists. Pressure is a very ancient anæsthetic in neuralgic affections and operations. Shock is nothing but reflex paralysis, often caused by the most trifling injuries. Thus, general massage of the body effects an irritation which, according to its degree and kind acts soothingly or excitingly. This is all the more important, as there is generally either neurasthenia or hysteria. Eccles reports that, after simple massage of the belly in weak subjects, the pulse sank to 30 or 40 a minute. Zabludowski gives cases in which an irregular 'hopping' pressure had a healing effect when a constant pressure could not be borne. Why is still a mystery. Wolzendorff lays special stress on the soothing and soporific effect of massage, particularly regular and gradually increasing pressure from the top to the bottom of the spine for about fifteen minutes. Perhaps we are here on the borders of hypnotism. There is ample opportunity of applying massage in internal diseases, such as anæmia, chlorosis, disturbances of the circulation, and in convalescence. He mentions particularly massage of the throat, which, however, he grants has been unduly praised. It is generally intended to have a depletory effect on the head and throat. Hence it is indicated in hyperæmia of the brain and its integuments, in epistaxis, in hyperæmia and inflammatory conditions of the jaw, nose, pharynx, larynx, and trachea. Both sides of the neck are stroked in a centripetal direction. The patient sits in an upright position, breathing gently, with the head bent slightly backwards. The doctor, standing before the patient, lays his hands, well bent downwards (*supinirt*), on the infra-maxillary regions, slowly turns the hands upwards (*pronirt*), and strokes regularly downwards to the claviculi. The pressure of the balls of the thumbs is directed chiefly against the venæ jugulares communes, that of the rest of the hand-surface against the superficial veins and lymph-vessels of the side of the throat. This stroking, which, by the way, can be done just as well from behind the patient, is continued for ten minutes, and can be repeated once or twice a day.

JOHN ELLIOTT.

ARTICLE 2205.

BIANCHI ON A CASE OF DESTRUCTION OF THE LEFT TEMPORO-SPHENOIDAL LOBE IN A LEFT-HANDED EPILEPTIC WITHOUT ANY INJURY TO SPEECH.[*]

In considering the bearings of his case, Dr. Bianchi makes a useful *résumé* of the accumulated facts concerning the functions of the temporo-sphenoidal lobes based upon a wide study of medical literature. Dr. Bianchi comes to the conclusion that the centre of greatest intensity in which the memory of heard words is realised lies in the central and posterior portion of the first temporal convolution, and that the second temporal gyrus also participates in this important function. This, the opinion of Kussmaul, has been recently sustained by Ross. Injury to this convolution causes word-deafness. This has been confirmed by a considerable number of observations carefully collected and recorded in Europe and America. Nevertheless, word-deafness is a rare affection, and we are thankful for new clinical studies carefully analysed. Dr. Bianchi observes that lesions limited to the first temporal gyrus are not constantly followed by the complete loss of the memory of words, and where this has been the case the complete word-deafness might be owing to the injury to surrounding parts carrying with it loss of function from which they would take time to recover. Dr. Bianchi says that there are observations on record which demonstrate that the second and third temporal convolutions on the side are also connected with the psycho-physiological mechanism of language. The gist of these observations is cited by him, but it would be too long to translate the passages.

Dr. Bianchi's patient was a man of twenty-seven years old of a neurotic family who had fits during childhood, and was of an unquiet and irritable disposition. As he could not learn any trade he became a domestic servant, and found a kind employer who bore with his occasional turbulence and epileptic attacks. Becoming more violent he had in April, 1881, to be sent to the asylum at Naples. Dr. Bianchi describes the man as suffering from post-epileptic mental weakness. Though generally humble and respectful in his manner, he would suddenly get into a fury on very slight provocation. As a rule he was very stupid and selfish, but now and then he had bright intervals. The fits became more and more frequent, the stupor following them became deeper, and the patient weaker, till he died in an epileptic attack on February 15, 1888.

The examination of the body was made by Professor Armanni. There were found hyperæmia of the membranes of the brain, and a slight effusion of blood under the membranes, hyperæmia and œdema of the lungs, wasting of the heart tissues, enlargement of the spleen, and congestion of the kidneys.

In the left hemisphere there was an apoplectic cyst, not of recent origin, which occupied the central part of the temporo-sphenoidal lobe. It was above four centimètres long and three broad. The second temporal gyrus, Dr. Bianchi tells us, was completely destroyed with a part of the deeper grey matter of the first temporal. The greater portion of the third temporal gyrus was also destroyed. The two lithographs given at the end of the pamphlet do not appear to me to exhibit so extensive a destruction of the three gyri; but perhaps Dr. Bianchi does not assign the same boundary to them which I should do, or, what is more likely, the destruction of the parts affects the deeper layers more than the surface. To look at the first plate, one half of the second and most of the first gyrus seem still to remain at least on their superficial areas. At any rate Dr. Bianchi, after examining and handling the brain in question considers that there was such a destruction of the left temporal lobe that it might have been expected that the function assigned to this portion of the hemisphere should have been lost. He explains the persistence of speech in the patient by the supposition that, the man being left-handed, the sensory speech centre lay in the right temporal lobe. Dr. Bianchi cites a number of observations to prove, that, in left-handed people, the lesion which causes motor aphasia requires to be in the right hemisphere. There are a few observations going to show that this holds good also in sensory aphasia. Word-deafness in a left-handed person is due to a lesion not of the left, but of the right temporal lobe. I am not sure that the specialisation of function to one side of the brain occurs so frequently in the temporal lobe as it does in the lower part of the left third frontal gyrus; but, as sensory aphasia is much rarer than motor aphasia, our clinical and pathological observations are not so numerous and decisive. Perhaps we must go on for some time collecting cases before we arrive at a stable conclusion. Studies and observations like those of Dr. Bianchi's are therefore of much value. W. W. IRELAND, M.D.

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[*] *Su di un Caso di Lesione Distruttiva del Lobo Temporo-sphenoidale Sinistro in un Mancino Epilettico senz' alcun Disturbo della Parola.* Per il Dottor L. BIANCHI, Professore di Pathologia all' Università di Napoli. Naples: 1888.

ARTICLE 2206.

SIEVERS ON THREE CASES OF RUMINATION.*

THE author first gives us a *résumé* of the different opinions upon rumination since 1618 (when Fabricius ab Aquapendente published the first case of this affection) until the present time. He recalls that since the appearance of the classical work by Adrien Dumur on the 'Paralysis of the Cardiac Orifice or Merycism,' the most recent authors see in this affection a nervous moving of the stomach accompanied by more or less diminution of the tone of the cardiac orifice. He thinks, however, that the true nature of rumination has not yet been thoroughly studied. Like Johannessen, to whom we owe the most detailed examination of this subject, Dr. Sievers says that before drawing any conclusion, the details should be more minutely studied. But while the researches already made do not explain satisfactorily the nature of rumination, they furnish us with very important facts for the therapeutic treatment.

Dr. Sievers publishes three cases of rumination which he observed in private practice at Helsingfors. Besides these, so far as he knows, there are only three other cases of rumination mentioned in Scandinavia and reported by Johannessen in *Zeitsch. für klin. Medicin*, Band x. and xii. In the first case described, the patient, aged 27, who had been a governess and sick nurse, belonged to a very nervous family, though none of them suffered from insanity or any other grave disorder. She had previously enjoyed good health; she always ate very quickly, and did not properly masticate her food. It is now ten years since she commenced to ruminate her food, after a sea voyage lasting from three to four days, during which time she had not defæcated, owing to want of convenience. Five, ten, or thirty minutes after eating, the food is collected in little balls in the mouth in order to be subjected to a second mastication. The patient seems quite at ease during rumination. After an ordinary dinner the rumination lasts from an hour and a half to two hours. If she moves about, or if even if she is disturbed, rumination begins sooner and is more active. Trying to restrain the process brings on such distress that the patient is compelled immediately to give in. During rumination she prefers to be seated; she leans forward, and at every mouthful which returns she lowers her head.

On scrutinising the abdomen during the act of ruminating one notices a dimple-like depression under the ribs. This is accompanied by an uneasy sensation passing from right to left. This does not extend farther than about the cardiac orifice. The patient feels a slight shock, and the food returns to the mouth. The stomach was found to be moderately distended with air. There was no retardation of digestion and no excessive secretion of gastric juice; but there was found to be unusual acidity of the contents of the stomach owing to the increased production of hydrochloric acid. No lactic acid could be detected. For this patient Dr. Sievers prescribed a teaspoonful of Carlsbad salts before dinner and supper, and a teaspoonful of bicarbonate of soda after each meal. The diet was to consist of milk, eggs, meat, and a very little bread. Under this treatment there was a gradual improvement; and at the end of five weeks the rumination had entirely ceased, nor did it return after she had discontinued using the alkalis.

The second case was a priest, 60 years old. He had constipation, eructations, and sometimes pain in the belly. The health was otherwise good. He had always ruminated; his father, now 88, did the same. The process commenced after a meal and lasted from two to three hours. He never tried to stop it, and does not think he could, as it goes on independently of his will. He did not desire medical treatment with a view to remove it.

The third case was a Jewess, 35 years old, of a highly neurotic family. Her father also ruminated; and one brother out of a family of nine occasionally did the same. She herself has ruminated from childhood. The food returns of itself. The act causes her no uneasiness which would not be the case if she tried to resist it. She did not desire medical treatment. The contents of the stomach were found to be very acid.

In *La Psichiatria* (Fasc. iii.-iv.) there is a paper on 'Rumination,' by Dr. Cantarano. He had opportunities of studying this affection in four idiots, two imbeciles, and three patients deeply demented. No uneasiness seems in these cases to have followed the process. Dr. Sievers, amongst other contributions to this curious subject, refers to the papers of Alt (*Berl. klin. Wochensch.*, 1888, Nos. 26 and 27) and of Boas (No. 31 same journal), and in the *Archives de Neurologie* (vii., 1884) the reader will find an interesting paper on 'Merycism,' by Doctors Bourneville and Séglas.

W. W. IRELAND, M.D.

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* *Finska LäkaresAllskapets Handlingar*, No. 5, 1889.

ARTICLE 2207.

WIDMARK ON THE INFLUENCE OF LIGHT ON THE ANTERIOR PARTS OF THE EYE.[*]

The reflection of light by snow, according to the author's views, produces the affection of the eyes called snow-blindness. Dr. Aug. Berlin, basing his remarks on personal experiences of this malady as a member of Nordenskiöld's Arctic Expedition in 1883, in a former number of the *Medicinskt Arkiv*, combats the reflection theory as a cause of snow-blindness, and traces it to the mechanical effect produced on the eye by the impact of small pieces of snow or ice during snow, fogs, or storms, and, when occurring in spring, to the desiccating effect of the sun's rays at high altitudes on the epithelium of the eye. He points out its coincidence at this time with erythema of the skin of the body, or of the parts exposed to the sun. Dr. Widmark's experiments, however, point in another direction. He says snow-blindness begins as a sensation like that of sand in the eyes, to which are added symptoms of lachrymation, photophobia, blepharospasm, and severe ciliary pain. Examination showed the presence of chemosis, pericorneal injection, and contraction of the pupils. In the more serious cases there was also present a diffuse corneal opacity, a sensibility to pressure in the ciliary region, and occasionally a diminished conjunctival secretion. Electric light and lightning produce a similar affection. Widmark has studied this malady by means of the solar rays, as well as with an electric lamp of 1,200 candle power. With these two lights he provoked in rabbits chemosis and injection of the ocular conjunctiva, contraction of the pupil, a slight alteration of the colour of the iris, opacity and epithelial desquamation of the cornea, and a diminished conjunctival secretion. These symptoms disappeared after from two to four hours. If a rabbit was tied up and exposed to an intense light, it kept quiet for several hours, continually watching the light. On this circumstance the following experiments were founded. There was placed before a rabbit's eyes a screen pierced by a hole 2 millimètres in diameter. The light fell through the opening on the retina. Six experiments of this kind only produced a slight opacity of the cornea, on the front of the pupil, but no irritation in the anterior media of the eye. There was fixed before another rabbit's eyes a needle with a head large enough to cover all the pupil, leaving the rest of the eye exposed to the light. Six experiments of this kind produced the usual symptoms, not a dazzling of the retina, but a direct irritation of the anterior parts of the eye. The ultra-red rays were isolated by a lens of rock salt blackened by iodine dissolved in sulpho-carbonate. They only produced a slight irritation of the anterior media of the eye. The luminous rays, isolated by means of a glass lens filled with a solution of alum, were almost completely inactive. The ultra-violet rays, on the other hand, produced a severe irritation. The author, by means of Ängström's spectrobolometer, experimented on two plates of perfectly equal appearance, one of glass and the other of rock crystal, and found that the principal difference between these plates was that the rock crystal allowed the passage of the ultra-violet rays, while the glass absorbed the greater part. But the rays which traversed the rock crystal plate caused a violent irritation, while those which passed through the glass were perfectly inactive. The author tries to show that the result of his researches corresponds to the nature of the rays, which produce the irritation of the anterior media of the eye, as well as the conditions in which these rays act. The electric light, the spectrum of iron, and lightning are all excessively rich in ultra-violet rays. This easily explains how often ophthalmia is produced in welding iron by the electric light. Sunlight is rich in luminous rays and ultra-reds, but the snow probably reflects principally the most refrangible rays. Clausius, Rayleigh, Nichols, Mänz, and K. Ängström have shown that pulverised substances, chiefly those which are white, allow the rays to pass to a greater wave length, but reflect those which are short. Snow is not entirely white, but of a bluish-white colour. According to Brücke and De Chardonnet, the cornea absorbs a part of the ultra-violet rays. The luminous irritation is, in consequence, according to the absorption of ultra-violet rays by the media. According to Brücke and De Chardonnet, the crystalline very quickly absorbs the violet rays. It is then possible that they constitute an additional cause of the origin of cataract produced by lightning. The researches of Gintrax seem to support the idea that the short wave lengths of light are the chief cause of solar erythema. The short rays seem to produce pathological processes on the parts of the bodies which are directly attacked. The strong absorption which the media of the eye exercise on the ultra-violet rays has then probably not only an effect on the sight itself, but also upon the vital processes of the retina. It is not unlikely that this sensitive organ would suffer a serious damage if the ultra-violet rays strike it without having previously undergone a diminution in intensity.

W. W. **Ireland**, M.D.

ARTICLE 2208.

JACOBSON ON GRAEFE'S MODIFIED LINEAR EXTRACTION.[*]

The recent and much-to-be-deplored death of Professor Jacobson, of Königsberg, lends an additional interest to his later writings, and this paper is especially fitted for posthumous notice, since it is practically a *résumé* of the writer's experience of cataract operation, extending over a period of thirty-five years—namely, from 1854 to 1888.

It is needless to say that Jacobson is an ardent upholder of the practice of making an iridectomy part of the operation of cataract extraction; indeed, he would seem to have had more to do with introducing this step than Graefe himself, although it is frequently attributed to the latter.

When Jacobson was appointed a 'privat-docent' at Königsberg, in 1854, Daviel's flap extraction was the method in vogue. The operation must have required considerable skill, and we know that the best operators lost 10 per cent. of their cases from suppuration of the cornea. What the percentage was among less known operators there are no means of ascertaining, but it was probably very great, for apart from the risk of suppuration, the difficulties in the operation itself must have led to frequent accidents. Without an anæsthetic, speculum or fixation forceps, and with a knife whose direction could not be altered when once it had fairly entered the chamber, faulty incisions could not have been uncommon. We are not, however, concerned with all the improvements that have been gradually grafted on to the operation, but only with Jacobson's share in their introduction.

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[*] *Nordiskt Medicinskt Arkiv*, Band xxi., No. 6.

[*] *Archiv für Ophthalmologie*, xxxiv. ii., pp. 197–275.

From the commencement he set himself to discover a means of diminishing the frequency of corneal suppuration. With this object he did not hesitate to examine all his cases of extraction daily after the first twenty-four hours using artificial light and focal illumination, and he did this regularly for five years. We are bolder now in these matters than we were even a few years ago, but in those days to expose an eye which had been operated upon within a fortnight must have been considered as little less than sacrilege.

The conclusions he arrived at were as follows: 1. Suppuration of cornea was most frequent when, with a relative small wound, the cornea was doubled back sharply at the exit of a hard and large lens, and was wrinkled when replaced. 2. It was relatively most frequent in the rare cases in which, owing to great flaccidity, the cornea sank in so that the edges of the wound were not in contact. 3. It might be said generally that traumatic reaction was in proportion to the resistance offered to the exit of the lens.

Jacobson therefore decided on placing his incision in the sclero-corneal junction instead of in the cornea, as was the case in Daviel's operation. The risk, however, of rupture of the zonule and consequent escape of vitreous from spasm of the orbital muscles was much increased, and to obviate this he used chloroform. This in itself was quite a new departure, and, although general anæsthesia subsequently became the rule in ophthalmic operations, and remained so until the introduction of cocaine, it was not till some years after Jacobson first used it for this purpose that its administration became at all usual. It was evident that an incision such as this would be more prone even than Daviel's to be followed by prolapse of the iris, and this was obviated by the performance of an iridectomy, apparently after the lens had been removed. After 1861 Jacobson states that he never performed Daviel's operation.

Meanwhile Graefe's assistant, Waldau, had devised an operation which consisted in making a corneal incision with a lance-knife, larger than that previously used, and extracting the lens by means of a spoon, an iridectomy being first performed in order to give room for the introduction of the scoop. This operation held its own for some time, and appears to have been a favourite in this country, the scoop being somewhat modified by Critchett.

In 1863 Mooren advocated iridectomy, as he believed that the suppuration started from the iris, so that iridectomy came to be recommended for three entirely distinct reasons, the prevention of plastic iritis or the limitation of its effects not being among them, viz., to prevent prolapse, to mechanically facilitate the operation, and prevent suppuration.

In 1863 Jacobson published his results, which showed a loss of only 2 per cent. from suppuration, and the whole subject was fully discussed at the Heidelberg Congress in 1864. It is interesting to find that Graefe at that time considered iridectomy superfluous, and that all the speakers except Jacobson were against the use of an anæsthetic. Although Graefe had used linear extraction, and Waldau's scoop-extraction in exceptional cases, up to this time he considered Daviel's operation the best for ordinary senile cataracts. It would seem, however, that this Congress marked a turning-point in the history of cataract extraction. Von Graefe, whom every one by this time looked up to as an authority, was dissatisfied with the results of Daviel's extraction, but not prepared to accept definitely any other proceeding in its place; he objected to the large scoop necessary in Waldau's operation, and the size of the flap in Jacobson's. He then came to London, and followed the practice of Mr. Bowman and the elder Critchett, who were then performing an operation which seems to have very nearly resembled Waldau's. It consisted in making a linear incision in the cornea immediately below the limbus with a very large lance-knife, the wound being enlarged when necessary with scissors. After laceration of the capsule, a small flat spoon (still known as Critchett's) was introduced. A small iridectomy was sometimes made, but was not considered essential. Graefe saw that this incision did not fulfil the conditions that he had laid down as essential—namely, that it should allow the exit of the lens with the least possible resistance. There can be no doubt, however, that this operation, as well as the scleral, or sclero-corneal, incision of Jacobson had a large share in the development of the linear incision lying in the sclerotic, which Graefe published soon afterwards, and which has ever since borne his name. At first he used traction instruments to extract the lens, but in 1867 these were abandoned.

Jacobson at once adopted the new method, and states that since 1867 he has performed over 2,500 extractions by it.

Jacobson is loud in his objections to the modifications to which this operation has been subjected; especially does he condemn the more corneal incision which has lately been advocated, and the abandonment of the iridectomy; he believes that in striving for a circular pupil the French school have sacrificed solid advantages, and, having been driven to make the incision either more corneal or less linear, have reverted to the faults of the older operations.

Jacobson's own experience is of great interest. It is as follows:—From 1854 to 1861 about 500 Daviel's extractions, with a loss of from 9 to 10 per cent., chiefly by suppuration. From 1861 to 1868, peripheral flap extraction (his own method), about 700 cases, with suppuration of the flap in 2 to 3 per cent. From 1868 to 1888, about 2,500 by Graefe's method, at first with the same percentage of suppuration, but with a great reduction of this during the last four or five years from more strict use of antiseptics.

W. Adams Frost.

Article 2209.

PFITZNER ON THE ORIGIN OF THE OBTURATOR ARTERY.*

The obturator artery arises in one of two ways; (1) from one or other of the two chief divisions of the internal iliac artery; (2) from the external iliac artery, either close to the epigastric or in common with it. As modifications the following may occur: (1) two equal or unequal sized arteries may be present, arising from the above-mentioned positions, and uniting at the obturator foramen, or (2) two such arteries may be present, of which one forms the ordinary obturator, the other, much smaller, terminating on the wall of the true pelvis. Two explanations have been given of these facts: (1) Henle, Langer, Hyrtl, and Gegenbaur consider them to be explained by the free anastomosis which the pubic branch of the obturator makes with the pubic branch of the deep epigastric; (2) others explain it by stating that the obturator artery arises typically in the embryo by two equal roots, one from the hypogastric, the other from the epigastric arteries.

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* Pfitzner, Dr. W.—*Ueber die Ursprungs-verhältnisse der Arteria obturatoria.* (*Anat. Anzeiger.*, Jahrg. iv., No. 16, S. 504; No. 17, S. 528.)

In the following tables the author gives the facts observed, the following abbreviations being used. Hyp, ep, il = artery, springing from hypogastric, epigastric, or external iliac; + = origin by two roots of nearly equal size; ( ) = one artery very small; O = no observation made on the side concerned. The first table, which is compounded from several of the author's, gives the results of the observations of Quain, Hesselbach, Schlobig, together with his own.

	M.	F.	Total.
R. Hyp.—L. Hyp.	112	74	186
———— —L. Ep.	19	22	41
R. Ep.—L. Hyp.	32	16	48
———— —L. Ep.	33	23	56
R. Hyp.—L. Hyp. + Ep.	4	1	5
R. Ep.— ————	0	1	1
R. Hyp.—L. H.	4	0	4
R. Ep.— ——	1	2	3
R. N.—L. Ep.	1	2	3
R. Hyp.—L. O.	11	7	18
R. O.—L. Hyp.	3	5	8
R. Ep.—L. O.	13	2	15
R. O.—L. Ep.	7	7	14
R. N.—L. O.	1	2	3
R. O.—L. Hyp. + Ep.	1	0	1
R. Hyp. + Ep.—L. Hyp.	1	0	1
R. Ep.—L. Hyp. + N.	1	0	1
R. Hyp.—L. Hyp. (Ep.)	1	0	1
R. Hyp. (Ep.)—L. Hyp.	1	0	1
R. Hyp.—L. N. (Hyp.)	1	0	1
Totals	247	164	411

It should be noted that though the authorities have been here, for the sake of gaining space, included in one table, it is apparently only in the author's own observations that the differences in size of the roots have been mentioned. This is mentioned lest the figures should in this respect mislead.

Besides these figures the following, in which the side was not mentioned, may be given.

Cloquet.	M.	F.	Total.
Hyp.—Hyp.	87	73	160
Hyp.—.Ep.	15	13	28
Ep.—Ep.	21	35	56
Il.—il.	2	4	6
	125	125	250

Hoffmann.—400 cases; 270 Hyp., 120 Ep., 5 Hyp. + Ep.; 5 Il.
Breschet.—63 cases; 12 Ep.

The next table relates to the question as to whether the origin is most frequently similar or dissimilar on the two sides of the body.

Table II.

	Similar.	Dissimilar.	Total.
Quain	118	41	159
Cloquet	222	28	250
Hesselbach	17	15	32
Schlobig	44	12	56
Pfitzner	71	34	105
	472	130	602

The next table relates to the side on which individual varieties most commonly occur. It is drawn up from cases only in which both sides were examined.

Table III.

	Hyp.		Ext.		Ext. + Hyp.		Total.
	R.	L.	R.	L.	R.	L.	
Quain	116	110	43	45	—	4	318
Hesselbach	20	17	12	15	—	—	64
Schlobig	34	44	22	12	—	—	112
Pfitzner	69	66	35	36	1	3	210
	239	237	112	108	1	7	704

We have next to see in which sex abnormalities most frequently occur. In this table it is, of course, possible to include all cases, and not only those where bilateral observations were made.

Table IV.

	Hyp.		Ext.		Hyp. + Ext.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.
Quain	127	119	51	59	3	2	181	180
Cloquet	189	159	61	91	—	—	250	250
Hesselbach	20	17	16	11	—	—	36	28
Schlobig	53	25	21	13	—	—	74	38
Krusche	53	10	10	6	—	—	63	16
Pfitzner	103	38	60	21	4	—	167	59
	545	368	219	201	7	2	771	571

The following figures are obtained by taking the percentage of cases in which the obturator artery sprang from the hypogastric.

Table V.

	M.			F.		
	Cases.	Hyp.	%	Cases.	Hyp.	%
Quain	181	127	70·2	180	119	66·1
Cloquet	250	189	75·6	250	159	63·6
Hesselbach	36	20	55·6	28	17	60·1
Schlobig	74	53	71·6	38	25	65·8
Krusche	63	53	84·1	16	10	62·5
Pfitzner	167	103	61·7	59	38	64·4
	771	545	70·7	571	368	64·4

In examining the percentage of abnormalities recorded by different observers great differences are discovered, which the author thinks must be racial. Krusche has also come to the same opinion. The following table gives the figures.

Table VI.

	Cases.	Hyp.	%
Quain (London)	361	246	68·1
Brescher (Paris)	63	51	81·0
Cloquet (Paris)	500	348	69·6
Hoffmann (Basel)	400	270	67·5
Pfitzner (Strassburg)	226	141	62·4
Hesselbach (Würzburg)	64	37	57·8
Schlobig (Leipzig)	112	78	69·6
Hartmann (Berlin)	180	146	81·1
Krusche (Dorpat)	80	63	78·8
	1986	1380	69·5

The paper concludes with a very full bibliography of the subject.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2210.

PFEIFFER ON DIGESTION IN SICK NURSLINGS.*

THE word digestion is here used in its widest sense, and includes both the secretion and the action of the digestive juices and the absorption of the dissolved nourishment. In sickness a fourth factor even comes into operation—the decomposition of the intestinal contents; for, although it is true that this takes place to some extent in health, yet in sickness it is often so overpowering as to throw everything else into the background.

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* *Jahrbuch für Kinderheilkunde*, vol. 28, part ii.

The change in colour of the stools from yellow to green deserves special attention. Biedert expresses the general view of the matter when he says in Vogel's *Text-Book of Children's Diseases*, 'The colouring matter of the bile is the cause of the yellowness of the stools, and this yellow colour, under the influence of the air, passes more or less into green through the conversion of bilirubin into biliverdin. When the digestion is upset, this frequently takes place in the intestines, probably through acid fermentation of the intestinal contents.' But on closer examination it is impossible to accept this view very readily. As far back as 1860, Städeler affirmed that biliverdin can be obtained from bilirubin when this is exposed to the air in a shallow vessel, and in alkaline solution. Further, if an acid, such as lactic, acetic, butyric, formic, or hydrochloric is added to the yellow motion of an infant, no green whatever is developed. On the contrary, the yellow becomes of a more intense hue, whether the acid is dilute or concentrated. It is, however, well known that concentrated nitric acid, which contains a little nitrous acid, gives a transient green discoloration to bilirubin; but even this soon passes into an intense yellow, and concentrated nitric acid is, of course, an impossible factor in the pathological discoloration. But, on the other hand, when a yellow stool is subjected to the action of a weak soda or potash solution, for from half an hour to an hour, it becomes markedly green; and if concentrated solution of caustic soda or potash is dropped on a fresh yellow stool, the colour becomes first brown and afterwards, on an hour's exposure to the air, an intense green. Hence it is very important to determine whether stools passed green owe their colour to the action of alkalies. On testing them with litmus paper they give a slightly acid or neutral reaction; but this is uniformly fainter than that of the normal yellow stools. Hence it seems probable that the green discoloration is due to alkalinity high up in the bowel; but that, lower down, the acidity prevails and is the cause of the acid reaction. On adding acids to green stools no reconversion into bilirubin takes place, but, on the contrary, the green becomes more pronounced.

The question now arises—How far does this view of the origin of the green stools tally with clinical experience? The author has already drawn attention to the fact that the stools of those children who are suckled by menstruating mothers or nurses are of an intense yellow just before menstruation (*i.e.* when the quantity of milk secreted is very small), and of a green colour when menstruation is over (*i.e.* when the quantity is very large). The explanation of this lies in the fact that the acids of the gastric juice are insufficient to neutralise the whole of the large quantity of milk ingested, and this therefore enters the small intestine with an alkaline instead of an acid reaction. Indeed, children who take abnormally large quantities of milk commonly have green motions. Further, the following experiment was made upon a healthy infant three months of age and nourished at the breast. For alternating periods of two days each it was given first dilute hydrochloric acid, and next bicarbonate of soda. During the acid periods the stools were constantly yellow and of strong acid reaction; while during the alkaline periods they were nearly always a deep green and of faint acid reaction. The experiments are, perhaps, scarcely sufficiently exhaustive to have based upon them a special line of treatment; but, if confirmed, they have an obvious bearing upon it. And in connection with this it must be born in mind that the best media for the growth of bacteria are, if not alkaline, at least alkalescent.

RALPH W. LEFTWICH, M.D.

ARTICLE 2211.

VÖHTZ ON RESECTION OF THE PYLORUS.

DR. J. C. H. VÖHTZ, in the *Hospitals Tidende* of May 1889, gives a description of some bold operations in the surgery of the abdomen, such as removal of echinococcus from the liver, laparotomy, pyosalpinx, and double salpingo-oöphorectomy.

The most remarkable of these is a resection of the pylorus.

Frederika D., 28 years of age, unmarried, entered the hospital at Copenhagen in June 1888. She had suffered for six months from pain in the right hypochondriac region, for which medicines gave her no relief. Later on she had pain in the breast and back, and on July 25 a tumour of the stomach was diagnosed. From this time she became rapidly emaciated, and in the beginning of November was little more than skin and bone, with a cachectic appearance. She weighed only 80 lbs. It was now determined to operate. From Nov. 17 to the 22nd measures were taken to clear the intestines and to wash them with solutions of salicylic acid. The patient was supported by nutrient enemata of albumin, maltose, barley broth, and brandy. The operation was performed on the 22nd by Dr. J. C. H. Vöhtz, assisted by Drs. Andersen and Grauer. The anæsthetic used at first was bimethylene, and afterwards a mixture of ether and chloroform. The operation lasted four hours. The incision in the abdominal wall extended to one centimètre below the umbilicus, which allowed plenty of room. The omentum was divided by a perpendicular incision. The pylorus was found to be strongly adherent to the wall of the pancreas, and several small glands were found to be involved by the cancerous degeneration. The pylorus was dissected free from the pancreas, and then the carcinomatous portion of the stomach removed. During the operation many arteries required to be tied. No trace of food was found in the bowels, nor did anything escape from the duodenum into the abdominal cavity. Beginning at the larger curvature, the operator then united the duodenum with the stomach, first behind and then in front, and then closed the remaining part of the stomach. The ends were brought together by a single row of tightly knotted silk sutures. The needle was passed obliquely through the serous coating, beginning at half a centimètre from the head of the incision, and was brought out half a centimètre from the opposite side of the serous coat. The edges of the cut intestines were thus turned inwards. The patient then became very pale, having lost a good deal of blood from the divided arteries. An injection of liquor potassæ chloratæ, with 2 milligrammes of sulphate of atropine, was given. It was found difficult to replace the large intestine, especially the transverse colon. The temperature in the evening after the operation was 38° C., after this it was always below 37° C. On the 23rd the patient slept the whole day without narcotics. Nutrient enemata were used till the 25th, when she took some barley soup and red wine. After this she took something every day by the mouth—first iced milk, then milk without ice, then yolk of egg with dry bread. On Dec. 1 the nutrient enemata were discontinued. On Dec. 29 the patient felt quite well. She weighed 97 lbs. She showed herself at the hospital on Jan. 26, 1889, when she was found to weigh 106 lbs. The portion of the stomach removed was 14 centimètres in circumference and 7 centimètres in length on the side answering to the greater curvature, and 6 centimètres next the greater curvature.

It was found to be a cylindrical epithelioma containing numerous cells. Dr. Vöhtz observes that Billroth considers infiltration of the glands as a contra-indication to the operation of resection of the pylorus. It is clear that the woman's life was saved by this operation, but the hope that the growth will not return at some other place does not seem to me a bright one. W. W. IRELAND, M.D.

ARTICLE 2212.

LAWSON TAIT ON ECTOPIC GESTATION.

THE subject of extra-uterine or ectopic gestation has from time immemorial been regarded as a curious freak of nature, the causes of which have not been very clearly made out. Our text-books, it is true, endeavour to account for its occurrence in a halting and inconclusive sort of way, but it has been reserved for Mr. Lawson Tait to formulate an explanation, based on clinical and pathological grounds, of the obscure conditions presiding over this misplacement. While we are not prepared to accept all Mr. Tait's statements on the evidence which he brings forward in support of them, we are fain to admit that his views accord better with what is known in respect of this abnormality than any that have hitherto come before us. The uncertainty and inconsistency of the views hitherto held on the physiology of the female reproductive organs, are to be attributed, partly to the fact that direct observation is impossible, and partly because the results of experiments on the lower animals have been applied to the human female without taking care to make sure that the conditions were the same. According to Mr. Tait the proper site of impregnation is in the uterus, and in the uterus only. He regards the ciliated epithelium, which lines the Fallopian tubes, as intended to prevent the further passage of spermatozoa, and he has been led to this conclusion by noticing that the observations which tend to prove the contrary were conducted on animals whose bifid uterus offered no sort of analogy to that of the human female. If that be admitted, it becomes evident that any pathological condition which has for effect to deprive the tubes of their cilia will facilitate the passage of the spermatozoa through them. As a natural consequence, fertilisation of the ovum may then take place anywhere along the tube, and, as the loss of the cilia converts the mucous lining of the tubes into one which is the counterpart of that of the uterus, the fertilised ovum forthwith becomes implanted on the walls of the tube, and a tubal gestation is the result. In support of this view may be mentioned the fact that most of these cases of ectopic pregnancy occur in women, who, though married, have either never had any children, or in women who, having had children, have been sterile for some years afterwards. In other words, these cases occur mostly in women who have given evidence of a diseased condition of the reproductive apparatus. Mr. Tait assumes that this diseased condition has had for effect to cause the disappearance of the cilia in the tubes, and, therefore, to contribute to the possibility of fertilisation taking place elsewhere than in the uterus. So much for the etiology of this redoubtable affection. Following the subsequent course of the ovum, the next thing is its enlargement with consequent distension of the tube. The Fallopian tube might go on distending indefinitely, were it not that it is weakened in one spot, wherever that may be, by the implantation of the placenta. Sooner or later, but always within the period devoted to the development of the 'cake' of the placenta, the tube tears at this particular spot, and internal hæmorrhage results. So far as the patient is concerned, the direction of the tear is of the very greatest importance, and Mr. Tait proceeds to explain the anatomical conditions which determine its direction. The middle part of the Fallopian tube is invested by peritoneum in much the same way as the small intestine, that is to say, a process of peritoneum derived from the broad ligament, forms a sort of mesentery, the only part of the tube walls not in intimate contact with it being the portion opposite where the two layers run off from the tube. Should implantation of the placenta take place at this precise spot, the effused blood will naturally find its way into the folds of the broad ligament, and will thus be extra-peritoneal. A tear at any other part of its circumference will lead to extravasation of blood *into* the peritoneal cavity, seeing that the rent will then extend *through* the peritoneum. The determination as to which of these two conditions has obtained, is of the first importance. If the hæmorrhage be in the broad ligament, the space is limited, and the conditions are distinctly favourable to coagulation and arrest of the hæmorrhage. If, on the other hand, the bleeding is going on into the peritoneal cavity, the capacity of which is practically unlimited, the patient in the majority of instances will promptly die from loss of blood, unless means be adopted to check it. Since the differential diagnosis of these conditions has so much importance in regard to the treatment, their respective signs and symptoms call for special attention. Fortunately, these are such as to make it easy to determine which way the blood has gone. When the hæmorrhage is intra-peritoneal, the physical signs are few and uncertain. The patient is collapsed, with the classic indications of internal hæmorrhage. By abdominal palpation some obscure fluctuation may be made out, though this is not always the case, and vaginally, the conditions are practically negative. In rupture into the broad ligament, on the other hand, we have a tense rounded tumour, extending upwards towards the umbilicus, and vaginally, the uterus is fixed, and the roof is flat and hard. Now for treatment, and here Mr. Tait can appeal with confidence to his statistics of results. Sub-peritoneal hæmorrhage may be left alone; absorption of the blood will sooner or later take place, and all danger will be at an end. The only cases that do badly are those in which the surgeon has been ill-advised enough to interfere. When, however, the hæmorrhage is into the peritoneum no such favourable termination can, in the majority of cases, be looked for, and the only chance of saving the patient from imminent death is to go at once to the broad ligament, and apply a ligature to the bleeding point. We have neither time nor space here to go into the other forms of ectopic gestation, respecting which, moreover, we know remarkably little. Only one other point need detain us, and that is the rare case in which the fœtus survives the rupture, and goes on developing. In that case our duty is to let it go on until full time, and then perform abdominal section for the purpose of removing a living child, a feat which Mr. Tait has successfully accomplished on at least three different occasions. The old plan of killing the fœtus by drugs or mechanical appliances only precipitates the very contingency which it should be the object of the surgeon to avert, since the death of the fœtus will in all probability be followed by suppuration, with all the risks incidental thereto.

ALFRED S. GUBB.

ARTICLE 2213.

AFANASÏEFF ON THE BACTERIOLOGY OF WHOOPING-COUGH.

At the third general meeting of Russian Medical Men at St. Petersburg, Professor Mikhaïl I. Afanasïeff read an able and exhaustive bacteriological sketch referring to pertussis. That whooping-cough represents an infectious and transmissible affection has been suspected from time immemorial. The first attempts, however, to thoroughly elucidate the causation and pathogenic principle were made only a score of years ago. It was Dr. Letzerich who first (Virchow's *Archiv*, 1870, vol. xlix., p. 530) discovered what he thought to be *the* pathogenic fungus of the disease. He then described some red-brown ovoid spores which could be detected in the patient's sputa in the catarrhal stage, and which, in the convulsive period, became transformed into a web-like and ramifying mycelium. The self-same spores were supposed to be inhaled by the patient, and, in consequence of their proliferation and vegetation, to cause all the symptoms of the affection. The inoculation of them in young rabbits gave rise to a disease closely resembling whooping-cough. Later on, however, Letzerich himself somewhat altered (*Ibid.*, 1874, vol. xl., p. 409) his original statements, and declared that the affection was caused by certain micrococci, becoming transformed in due time into 'plasmatic spheres,' which, on bursting, gave issue to a number of young cocci, &c. On certain media, however, the microbes developed a mycelium bearing brown-yellowish spores. The fungus was classified by the discoverer amongst the *Ustilagineæ Tul.* Letzerich's researches were followed by those of Professor A. Tschamer (*Jahrbuch für Kinderheilkunde*, 1876, vol. x.; and *Centralbl. für Kinderheilkunde*, vol. i., p. 131), who arrived at the conclusion that pertussis represented a mycosis of the respiratory mucous membranes, caused by the fungus *capnodium citri*, which was said to be nothing else than an oidium form of the common *ustilago maïdis*. An intratracheal introduction of the spores of the *capnodium* or the *ustilago* itself gave rise to the same train of symptoms (tracheal and bronchial catarrh) as caused by that of dry powdered sputa from patients suffering from pertussis. Somewhat later Professor Birch-Hirschfeld (*Centralbl. für Kinderheilkunde*, 1878, vol. i., p. 115) and Dr. Rossbach (*Berliner klin. Wochensch.*, 1880, p. 253) published their respective investigations, which failed to furnish any support for Letzerich's and Tschamer's statements. Both of the authors most emphatically refused to recognise the fungi as anything pathogenically specific in regard to whooping-cough. As a matter of fact, their inoculation experiments had given wholly negative results. Meanwhile there appeared other pretenders to the title of a pathogenic microbe of pertussis. Thus, Dr. Henke (*Deutsches Archiv für klin. Medicin*, 1874, vol. xii., p. 630) claimed the honour for some peculiar globular cells, measuring 0·01 or 0·02 μ, and possessing an eccentric nucleus and numerous rapidly-moving points. [To judge from some remarks by Professor Afanasïeff, the 'peculiarity' of the cells seemed to consist mainly in their being identical with leucocytes.] Then, Dr. Burger (*Berliner klin. Wochensch.*, No. 1, 1883) described his small-sized rod-shaped bacterium, which was said to occur exclusively in pertussis, and that always in enormous masses, its numerical strength being directly proportionate to the intensity of symptoms. Further, Dr. Deichler (*Zeitschrift für Wissenschaftliche Zoologie*, 1886, vol. xliii.) found in the sputa a certain characteristic protozoon 'belonging to the rhizopoda, infusoria, or flagellata,' and possessing amœboid motion (and altogether being, apparently, a next-of-kin to leucocytes, like Henke's microbe). Similarly, Moncorvo, Poulet, Broadbent were able each to discover a specific microbe of their own. In view of the *embarras des richesses*, Professors Vogel and Hagenbach, at the Wiesbaden meeting of Therapeutists in 1887 (*Deutsche med. Wochensch.*, Nos. 18 and 19, 1887), summed up the state of the question in these words :—'Pertussis is an infectious disease, caused by a specific microbe which remains yet unknown.' They were not aware at the time, however, that Professor Afanasïeff, of St. Petersburg, and Dr. Dmitry G. Semtchenko, of Kazan, had carried out each an important series of researches settling to all appearance the bacteriological problem beyond doubt.

Professor Afanasïeff's investigations (*vide* also the *Vratch*, 1887, Nos. 33, 34, 35, 37, and 38; as well as his 'Advances in Bacteriology' in *Carl Ricker's Calendar for Medical Men*, 1888, vol. ii., p. 183), the first materials for which were supplied, in March 1886, by his own four children, attacked by the disease, may be summarised briefly as follows. 1. In the sputa of patients suffering from whooping-cough there is invariably found a minute and short bacillus, which differs both morphologically and biologically from all pathogenic and non-pathogenic bacteria yet described. In some cases, more especially in those complicated by broncho-pneumonia, the microbe is detected in an almost pure cultivation. 2. The bacilli measure in length from 0·6 to 2·2 μ, and in breadth from 0·4 to 0·5 μ. They lie mostly free and isolated, but sometimes are arranged two and two, or in short trains, or in small heaps. Now and then they are met enclosed within pus-cells. The best plan for their detection consists in (*a*) picking out yellowish or greyish clumps from the patient's sputa; (*b*) spreading them in a thin layer by crushing between two cover-glasses; (*c*) staining with a 1 or 2 per cent. solution of gentian-violet (by immersing the glasses into the fluid and gently heating the whole); and (*d*) examining under the power of from 700 to 1,000 (Zeiss's ocular 3 or 4, objective $\frac{1}{12}$). 3. On meat peptone jelly, solidified blood serum, and

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[*] AFANASÏEFF, PROFESSOR MIKHAÏL I.—Review of Researches concerning the Etiology and Clinical Bacteriology of Whooping-Cough. (*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, No. 10, 1889, p. 395.)

meat peptone agar, at the ordinary room temperature the bacteria grow but slowly; at 37° or 38° C., with rapidity. They do not liquefy any of the media. When inoculated by puncture to agar (in test-tubes) the microbes form a steadily spreading, superficial, slightly elevated film, which at first is semi-translucent and dusky greyish, but subsequently becomes quite opaque and white. On solidified serum the growth proceeds in an almost similar way, but is more concentrated about the needle-puncture, while the film remains transparent and greyish all through. On jelly, the film is comparatively thinner, hardly visible to the naked eye, transparent, greyish, with uneven surface and irregular outlines; with time it assumes a whitish colour along the periphery. On potato, the growth is rapid and luxuriant. At the site of the inoculation there appears a shining pellicle, in the beginning yellowish; later on, cinnamon-brown; measuring 2 or 3 millimètres in thickness and swiftly spreading towards the very periphery of the potato disc. In meat peptone-broth, there soon (on the next day after the inoculation) appears a nebula with deposit at the bottom of the flask; the sediment consists of the bacteria, which are lively, moving in various ways; sometimes they are arranged in short chains. The broth bacilli, as well as the jelly specimens and those from the sputa, are thinner and shorter than the microbes in the agar, and especially in potato cultures. 4. When introduced into the trachea or directly into the lung in young dogs and rabbits (18 experiments), the bacillus (its pure culture) gives rise to an affection characterised by bronchitis or broncho-pneumonia, catarrhal rhinitis, spasmodic cough, &c.; in short, most closely resembling pertussis in man. 5. At the *post-mortem* examination, the respiratory mucous membranes (invariably that of the bronchi, sometimes that of the trachea or even the nose) and bronchopneumonic foci in the animals prove to contain the bacilli, which not unfrequently are present in pure cultivation. 6. The same bacteria are also found in the tracheal, bronchial, and pulmonary mucous discharge in children dying from pertussis (4 cases). 7. In view of the facts sketched, such methods of treatment of pertussis as inhalations or insufflations of antiseptic means (*e.g.* carbolic acid after Pick's and Monti's plan) must be recognised as most rational ones.

At the suggestion by Professor Afanasïeff, who was anxious to verify his results, Dr. Semtchenko took up the line to further investigate the matter, especially in clinical regards. The conclusions (*see* also the *Vratch*, 1887, Nos. 45, 49, 50, and 51, p. 865) arrived at by the Kazan pediatrist may be given thus:—1. Afanasïeff's bacterium is actually specific and, hence, fully entitled to bear the name of the *bacillus tussis convulsivæ.* [As a matter of fact, Dr. Semtchenko found the microbe in all fourteen consecutive cases examined (of which four ended fatally), while it proved invariably absent in all patients suffering from other respiratory affections, such as bronchitis, bronchial asthma, catarrhal pneumonia, croupous pneumonia, pulmonary tuberculosis, &c.) 2. The micro-organism makes its appearance in the sputum during the catarrhal stage, somewhere about a fourth day of the disease, but possibly still earlier. 3. Subsequently, its numerical strength increases, the intensity of paroxysms keeping pace with the increase. 4. The microbes disappear from the discharge, apparently, somewhat before a complete cessation of whoops (about the time when the number of paroxysms sinks down to four or two per day). 5. As soon as pertussis becomes complicated with catarrhal pneumonia, the bacilli in the patient's sputa show an enormous increase in number. 6. Altogether the pertussis pneumonia seems to be quite different from other varieties of pulmonary inflammation. 7. The *bacillus tussis convulsivæ* presents a great importance not only in etiological and diagnostic, but also in prognostic regards. 8. As to the behaviour of the microbe towards antiseptic agents, its vitality is destroyed as soon as the medium (jelly) contains corrosive sublimate in the proportion of 1 to 60,000, or resorcin in that of 1 to 1,200, or phenol in the same one, or hydrochlorate of quinine in that of 1 to 800.

Drs. Afanasïeff's and Semtchenko's researches were recently repeated (at least, partially) by Professor Tschamer (*Wiener med. Wochensch.*, No. 17, 1888) and Dr. Wendt, of New York (*Medical News*, June 2, 1888). On the whole, both of the authors confirmed the statements made by the Russian observers. Dr. Wendt, however, differs from Dr. Semtchenko in some more or less subordinate points. Thus, he could not detect the presence of the bacilli in earlier stages of the affection; neither was he able to notice any co-relation between the number of paroxysms and that of the bacteria in the patient's sputa; while, on the other hand, he found still the bacilli in the discharge, even after a complete disappearance of whoops.

In conclusion, Professor Afanasïeff draws attention to the several points which demand further elaborate investigations. It is necessary, he says—1, to more closely examine the distribution of the microbes in the respiratory mucous membrane, as well as in bronchopneumonic foci; 2, to study the behaviour of the bacterium towards various colouring matters (in order to discover a characteristic differential test for the bacillus); 3, to study the spore-formation (which is important, especially in prophylactic regards); 4, to most carefully inquire into a clinical bacteriology of the pertussis sputa, from the beginning to the end of the attack, and even during convalescence (which is important for diagnostic, prognostic, and prophylactic purposes); and 5, to further study the behaviour of the bacillus towards all possible parasiticide agents (to possibly discover some *specific* bactericidal substances, which discovery would prove of untold value in regard to the therapeutics of the infantile scourge in question).

V. Idelson, M.D.

Article 2214.

DYSART McCAW ON THE HYGIENE OF MIDWIFERY.

In the *Provincial Medical Journal* for October 1889, Mr. John Dysart McCaw, F.R.C.S.Ed., says that 'clean hands' is the motto of modern obstetricians. The older midwifery writers preached the doctrine of chastity: 'Thine is a high and holy calling; see that thou exercise it with purity.' The professors of obstetrics in this age urge with equal earnestness the cleansing of the outer man with subtile chemical solutions. He points out that this idea of the practical application of Listerian principles to the practice of midwifery did not originate in England, but that the first impetus to the study and practice of obstetric antisepticism in this country followed the publication in the year 1884 of two admirable reports on 'Obstetrics,' by Dr. W. C. Neville and Dr. Arthur V. Macan, in the *Dublin Journal of the Medical Sciences*.

Hoch first published his conclusions as to the relative value of the different disinfectants in 1881. From his experiments it became known that weak solutions of corrosive sublimate formed the most powerful of all known measures of disinfection. This led to its use for *obstetric* purposes. The results of the first trials came from the Breslau clinic, and the methods of using it there were conveyed to the readers of the *Provincial Medical Journal* by Mr. McCaw in October 1884, in a short paper on 'The Practice of Obstetric Antisepticism at Home and Abroad,' in which it was clearly proved that the adoption of antisepticism in midwifery had caused an amazing decrease, both in puerperal mortality and in puerperal morbidity. At the International Medical Congress in 1884, Dr. Ingersley, Copenhagen, gave an interesting summary of his researches into puerperal mortality, in the towns of the Danish provinces, and in Copenhagen for seventeen years, and made a calculation of the deaths from puerperal fever in the towns, in the country districts, and in the maternities; this was checked with the greatest possible care, and showed an evident decrease in the puerperal mortality which undoubtedly was due to a more strictly antiseptic conduct of labours, even outside the maternities. Since Drs. Neville and Macan (to whom the writer believes the credit to be due) spread the principles of this continental practice amongst the medical profession of this country, the *toilet* of the parturient woman and her attendants has received more than ordinary attention.

Very little, if any, advance has been made in recent years in antiseptic midwifery; the time-honoured napkin has long since been discarded for the more comfortable 'sanitary towel,' or 'the gauze-bag of sublimate wood-wool,' and tiny pellets are now carried in the pocket to make our antiseptic solutions of any required strength at the bedside. Ablution is not now regarded with horror by the patient and her friends, but nothing really novel has lately been suggested. Strict cleanliness is the great secret of success in midwifery work. Both patient and attendants must be scrupulously clean. This is of first importance whether antiseptics are used or not. Outside lying-in hospitals—in private practice—with this principle before the mind, and making it a rigid rule, and with good hygienic surroundings, the constant observance of a hard-and-fast antiseptic routine in midwifery practice is not to Mr. Dysart McCaw's mind absolutely essential to successful results. He is, however, strongly of opinion that in all public maternities and lying-in hospitals the most strict antiseptic precautions ought to be always observed. In private practice, where the practitioner or nurse may have been recently brought into contact with scarlet fever, diphtheria, erysipelas, or indeed any zymotic disease, preventive measures must be also adopted before, during, and after confinement. Dr. Cullingworth, thinks the writer, deserves the thanks, both of his professional brethren and the public, for his forcible and practical addresses on this important subject to the students of St. Thomas's Hospital last October, and to medical practitioners at the last meeting of the British Medical Association. Patients and nurses, trained and untrained, cannot be too strongly impressed with the absolute and vital importance and necessity of antiseptic cleanliness in midwifery practice.

The writer states that in his own practice, extending over some two and twenty years, he has had a very happy and perhaps somewhat singular immunity from death among his midwifery patients, having attended 2,500 labours without a maternal death. This satisfactory record he attributes mainly, if not solely, to a thorough observance of as perfect cleanliness as possible, and to a firm resolution to keep in mind all likely sources of contamination to patients, and the best means of avoiding and preventing it.

SURGERY.

RECENT PAPERS.

2215. Abbe.—On a Proposed Substitute for Senn's Plates in the Surgical Treatment of Intestinal Obstruction. (*New York Med. Jour.*, March 1889.)

2216. Brokaw.—On Intestinal Anastomosis. (*Weekly Med. Review*, August 1889.)

2217. Boeckel.—On Drainage of Operation Wounds.

2218 Hare.—On Wounds of the Heart. (*Medical and Surgical Reporter*, June 22.)

2219. McArdle.—On an Occasional Serious Result of Artificial Intestinal Distension. (*Dublin Jour. of Med. Science*, August-October 1889.)

2220. Willard.—On the Operative Treatment of Spinal Caries. (*Transactions of the College of Physicians of Philadelphia*, March 1889.)

2221. Senn.—On the Treatment of Bone Cavities. (*International Jour. of Med. Sciences*, September 1889.)

2222. Thomson and Kendal Franks.—On Arthrectomy. (*Dublin Jour. of Med. Science*, August 1889.)

2223. Terrillon, Dr.—On the Treatment of Goître by Interstitial Injections of Tincture of Iodine. (*Bull. Gén de Thérap.*, Sept. 30, 1889.)

2224. Borsuk, Dr. Maryjan.—A Case of Crural Ulcer treated after Thiersch's Method. (*Gazeta Lekarska*, No. 14, 1889, p. 300.)

Art. 2215. *Abbe on a Proposed Substitute for Senn's Plates in the Surgical Treatment of Intestinal Obstruction.*—The *New York Medical Journal* for March 23, 1889, contains a paper read by Dr. Robert Abbe before the New York Surgical Society, on a case of complete obstruction of the colon successfully relieved by using Senn's plates. These plates, the use and mode of application of which cannot be readily explained except by drawings or actual demonstration, were devised by Dr. Nicholas Senn with the view of shortening the operation for restoring the intestinal canal in cases of complete obstruction. The principle of this method is to substitute for the tedious stitching of the lips of two longitudinal openings in adjacent portions of intestine a compression of those edges between two discs of decalcified bone placed within the bowel and tied tightly to each other, thus bringing about adhesion by approximation. The case recorded in this paper serves to illustrate the advantages of this method in certain instances. Above and below a complete obstruction by neoplasm of the hepatic flexure of the colon, the transverse and ascending portions of the gut, where they lay side by side, were opened each by an incision one inch and a half long, made across one of the longitudinal bands. A perforated bone plate was slipped into the gut through each wound and then, the opened portions of colon having been brought together, the co-optation was maintained by connecting one plate with the other by sutures passed through the wall of the gut on each side. The patient recovered from this operation, and on the tenth day the bowels were relieved. After an interval of three months, during which the general health had improved very much, death occurred as a result of the natural progress of the disease which was cancerous stricture of the colon. The *post-mortem* examination proved the efficacy of the plates. These had evidently been dissolved and passed away, but the sutures still remained firmly attached to the margins of the artificial aperture. It occurred to Dr. Abbe that, as it takes many days to prepare Senn's plates, a ring might be composed of catgut quite as absorbable and as firm as decalcified bone. The ring recommended as a substitute for the bone plate consists of the thickest catgut softened in hot water until it ceases to twist on itself. It is then formed into a ring of four strands on the ends of three fingers, and wound over and over with the same-sized gut tightly applied. When completed this ring is stiff and flat and shows no disposition to curl. The elasticity of this ring, and its tendency to take an oval shape, serves to hold the edges of the wound apart during healing, and so ensures against two accidents which in experiments have occurred with plates—firstly, the partial closure of the orifice; and, secondly, the blocking of the opening in the plate. Dr. Abbe has proved the efficiency of this catgut apposition ring by experiments on dogs.[*]

2216. *Brokaw on Intestinal Anastomosis.*—Dr. A. Brokaw, of St. Louis, Mo., has recently devised what he believes to be a far more simple technique than the decalcified bone plates of Senn or the catgut rings of Abbe, and offered as a substitute rings of unperforated rubber tubing, which, it is stated, if prepared in the following manner, will greatly simplify the process of forming intestinal anastomosis (*Weekly Medical Review*, Aug. 17, 1889). 'Unperforated drainage tubing of a diameter less than one-fourth of an inch is selected. In most cases white-ribbed tubing, one-seventh or one-fifth of an inch in diameter, will be found preferable. Of this a section is taken some three inches long, or even longer, according to the size of the opening desired. Through the lumen of this section of tubing are passed several strands of dried juniper catgut; these strands are left to protrude for some distance from the extremities of the tubing to facilitate the process of tying. When the ends of the catgut strands are tied together an oval elastic ring is formed, which will maintain its shape until the strands give way, when it will straighten out and pass from the bowel. From four to six small slits or openings are made at equal distances from each other in the sides of the ring. Through these openings are passed fine silk sutures, which are fastened to the strands of catgut. If catgut be used instead of silk the sutures need only be attached directly to the rubber tubing.' The advantages claimed for rings thus prepared are these—*a*, on compressing laterally the ring its introduction through the intestinal opening, even though this be quite small, is very easy, and the ring immediately resumes its oval shape within the intestine; *b*, there is no tendency to a lateral falling together of the margins of the wound, or to lessening of the aperture which might occur through the softening of the catgut rings. The simplicity in the preparation of these rings is urged as a strong plea in their favour, as, in cases of emergency, they can be made in a few moments.

2217. *Boeckel on Drainage of Operation Wounds.* Dr. I. Boeckel, of Strassburg, who for many years had protested against prolonged drainage in the treatment of wounds, has recently discarded drainage altogether after operations, and now regards this practice as erroneous and absurd. In favour of this opinion, a report was made in May to the Société de Chirurgie, of Paris, of thirty-six cases of operation treated in the Strassburg clinique with complete and speedy success without the use of drain tubes. This list of cases included one of trephining for compound fracture of the cranium, four of cancer of the breast, two of amputation of the thigh, and ten of resection of the knee. In most instances the wound was covered by iodoform dressing, which was allowed to remain until the completion of the healing processes. Dr. Boeckel is a firm believer in the antiseptic method, but endeavours to attain simplicity of detail in the use, during and after operation, of surgical appliances and dressings. The essential point, he holds, is to maintain a rigorous antisepsis during the operation, from the first application of the knife to the completion of the dressing. In certain operations, such as resections of the knee and elbow, and, indeed, articular and osseous resection in general, Dr. Boeckel, in order to save time and to avoid all possible risk of infection from the presence of ligatures and the temporary contact of hæmostatic forceps, trusts to methodical compression and vertical elevation of the limb for the prevention of hæmorrhage. The surgeon, it is held, should, in a course of a long operation, wash his hands frequently in a weak solution of corrosive sublimate. Gauze pads are used in the place of sponges, and in order to obliterate as far as possible any cavities at the bottom of the wound, the flaps are brought together by deep sutures. Owing to these precautions, Dr. Boeckel is now able in any serious operation to dispense with the inconvenient plan of drainage, and at the same time to effect complete healing of the wound under a single dressing. In all the thirty-three cases mentioned in this report, repair, it is stated, took place in a very striking manner, and without fever, pain, or suppuration.

2218. *Hare on Wounds of the Heart.*—In the *Med. and Surgical Reporter* of June 22 Dr. H. A. Hare, of the University of Pennsylvania, referred to several recorded cases of wound of the heart which, in his opinion, make it evident that such injury is not necessarily fatal, and that the fatality of a wound of this organ depends upon the hæmorrhage which ensues from a complete solution of continuity of the cardiac wall or an involvement of the nervous ganglia in the cardiac substance. The author has since followed up this subject, and has in the same periodical (August) published the results of some experiments on dogs, from which the following conclusions are drawn:—1. There are three ways in which death may occur in cases of heart wounds: (*a*) by hæmorrhage from the cardiac cavities; (*b*) by hæmorrhage from the heart muscle itself; and (*c*) by injury to the centre, which Kronecker and Schmerz have localised in the dog's heart—a spot above the lower limit of the upper third of the ventricular septum, which, when it is injured, brings the movements of the heart to a standstill. This is the so-called co-ordinating centre. 2. The lethal result of a heart wound depends largely upon the rapidity with which a hæmostatic clot is formed in the opening. 3. Heart wounds heal by the formation of hæmorrhagic exudation, which plugs the leaking openings and permits repair. 4. Wounds of the heart, however severe, are not necessarily fatal simply because they are wounds of this organ. Death is often due to secondary causes, chief among which are pericarditis, cardiac myositis, and endocarditis; a fatal sequence even more rapid in its onset may be embolism from heart-clot.

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[*] In a subsequent paper, read before the Philadelphia County Medical Society on May 8, Dr. Abbe recorded a case of intestinal fistula after laceration of the gut during the removal of a suppurating ovary, in which the above-mentioned catgut rings were used with very satisfactory results. The patient made a speedy and good recovery after the operation, and the continuity of the intestinal canal was completely restored.

2219. *McArdle on an occasional Serious Result of Artificial Intestinal Distension.*—In an interesting contribution to the surgery of the abdomen (*The Dublin Jour. of Med. Science*, August-October 1889), containing several cases of successful laparotomy, Mr. J. S. McArdle, of St. Vincent's Hospital, Dublin, directs attention to a strange condition, produced under certain circumstances, by inflation or injection of the gastro-intestinal canal. This condition consists in a state of collapse more or less profound and prolonged, followed by fever of varying intensity, and usually intermittent. Alluding to the points of most interest in this state, the author asserts that prostration sets in within two or three hours of the distension of the bowel, and that, before a rise of temperature occurs, a clammy perspiration breaks out over the patient's head, face, and chest. The fever usually reaches its height in from eight to ten hours; and afterwards, from two to five days, there is a gradual fall, the evening temperature being a degree or so higher than the morning. When the attack is severe and prolonged, the face, it is stated, assumes a dusky appearance, the eyes appear glassy, and the tongue becomes foul. The circumstances under which Mr. McArdle has observed this febrile condition are inflamed bowel, ulceration in the distended part, and long-standing stricture, more or less complete. This condition, which is compared with the more marked varieties of catheter fever, to which it presents great resemblance, is thus explained:—hyper-distension of the bowel, when intermittent, causes expulsion of the contents of the terminal capillaries at the diseased area; thus, absorption of septic products from the neighbouring ulcers is allowed, and continued pressure drives colonies of micrococci along the lymphatics and venules of the part. Added to this is the danger of microscopic lacerations of the coats of the bowel, allowing free invasion of the lymph spaces. Acting on this view, Mr. McArdle invariably washes out the stomach and intestines with weak carbolic or boric solution prior to inflation.

2220. *Willard on the Operative Treatment of Spinal Caries.*—In a contribution to the *Transactions of the College of Physicians of Philadelphia*, March 6, 1889, Dr. Forest Willard considers the subject of the operative treatment of spinal caries under three heads: evacuation of pus; erasion or removal of carious bone; vertebrectomy or excision of the lamina for the relief of pressure paralysis. Spinal abscess is treated by preliminary tapping and injection into the emptied sac of a solution of iodoform, which is allowed to remain, and, after an interval of ten days or more, free opening of the cavity under antiseptic precautions and drainage. Dr. Willard does not write very favourably of erasion or removal of carious bone, and brings forward the following objections to this plan of treatment: (*a*) a sequestrum is rarely present, and, if present, is situated in the body of the vertebræ; (*b*) it would be impossible to reach the body, save in the lumbar region, without the sacrifice either of the articular process or of portions of several ribs; (*c*) in caries it would be almost impossible to judge of the exact amount of devitalised bone, and, as in other osseous structures, the process of removal with the gouge would certainly destroy the underlying layer of bone, and thus become a fresh source of osteitis. In so far as good drainage is secured by erasion, Dr. Willard heartily approves of the practice, but as regards the complete removal of the carious bone he has great doubts. Dr. Willard deals finally with the operation of laminectomy or trephining of the spine, for the relief of pressure on the cord. An analysis is given of the cases recorded by Macewen and other surgeons, and the following conclusions are regarded as justified by the present state of our knowledge of this subject: (1) Improvement from pressure paralysis in vertebral osteitis is common, and may be confidently expected when extension and fixation can be properly carried out, provided motion and sensation have not been entirely absent for many months, and when serious changes in the cord have not occurred. Hence, an operation should not be undertaken until these measures have been persistently tried and proved ineffective; (2) vertebrectomy for the relief of pressure in cases of spinal caries is still in an experimental stage; (3) the operation, even if effectual in relieving the pressure on the cord by permitting posterior expansion, or from removal of bony or inflammatory growths, yet promises no certainty of permanent relief, since degeneration of the cord may already have been far advanced; (4) early operation would doubtless be much more successful, as it might antedate these changes in the cord; but our present diagnostic facilities do not permit us to distinguish accurately these cases from those in which a less serious plan of treatment would be followed by the rapid restoration of lost power. (5) Pending further knowledge, we can say, however, that the operation is permissible in cases in which after persistent treatment by suspension and fixation, complete motor and sensory paralyses, with spastic rigidity of the muscles, exist together with exaggerated reflexes, which have been present, but which have after a time subsided or been lost.

2221. *Senn on the Treatment of Bone Cavities.*—The *International Jour. of Med. Sciences* for September 1889 contains an interesting contribution from Dr. Senn, of Chicago, on the *Healing of Aseptic Bone Cavities by Implantation of Antiseptic Decalcified Bone.* This, it is stated, is the best substitute for living bone grafts in the restoration of a loss of substance in bone. In the treatment of bone cavities Schede aims at the careful conservation of blood-coagulum in an aseptic wound. This surgeon's experience with such plan of treatment has been exceedingly favourable, small cavities in bone having been healed completely within a fortnight, and large cavities within six weeks. Antiseptic decalcified bone, however, is regarded by Senn as preferable to blood-clot, as it is not only a perfectly aseptic, but also at the same time a strongly antiseptic substance. 'Implantation of a disc or plate of antiseptic decalcified bone into a cranial defect may,' it is stated, 'be relied upon as a hæmostatic measure in arresting bleeding from the vessels of the diploë; it constitutes a good temporary substitute for the lost portion of the cranium; it prevents the direct union of the brain, or of its envelopes, with the pericranium; and, finally, it furnishes the most favourable condition for the production of new bone from the margins, and the closure of the remaining defect by a firm and unyielding membrane. The packing of an antiseptic bone cavity with chips of antiseptic decalcified bone guards against unnecessary loss of blood, and exerts a potent influence in the prevention of infection by pus microbes that might have remained upon the surface of the wound or in the tissues. Capillary drainage by an absorbable drain should be established after implantation for the purpose of preventing the accumulation of more blood in the wound than is necessary to form a temporary cement substance between the bone chips and between the contents of the cavity in the surrounding tissues. In the treatment of an aseptic bone cavity by implantation of chips of antiseptic decalcified bone, the packing answers the purpose of an antiseptic tampon, and furnishes the best medium for the growth and development of the tissue resulting from the regenerative processes initiated by the trauma. Secondary implantation can be successfully practised in the treatment of a suppurating cavity after suppuration has ceased, and the cavity can be transformed into the same favourable conditions for healing as an aseptic wound.' Dr. Senn, in describing his method of decalcification and disinfection of bone, states that the fresh tibia of the ox furnishes the best material. The bone is cut in sections 2 inches in length, which, after careful removal of the medullary tissue, are kept in dilute muriatic acid, the fluid being changed every few days until the process of decalcifiation has been completed. After this has been accomplished the bone can be readily cut into pieces, each about 1 millimètre in thickness, the section being made parallel to the long axis of the bone. The acid is then removed by washing and by keeping the bones immersed in a weak solution of caustic potash. The fragments of bone are then rendered antiseptic by keeping them until needed in a solution of sublimate in alcohol 1 to 500. When the bone is needed it is taken from the bottle and placed in a 5 per cent. solution of carbolic acid or a weak solution of sublimate.

2222. *Thomson and Kendal Franks on Arthrectomy.*—In the course of a discussion of an interesting paper on arthrectomy, or erasion of the knee-joint, read by Mr. Heuston, of Dublin, at the Royal Academy of Medicine in Ireland, on March 29 (*The Dublin Journal of Medical Science*, August 1889), Mr. Thomson stated that certain *à priori* objections he had formed with regard to this plan of treatment had not yet been removed. One objection taken to excision in favour of the removal of the synovial membrane was the avoidance of the danger of shrinkage, or the arrest of development of the limb after excision. Mr. Thomson, however, having seen many cases of excision, has never seen any resultant arrest of development of the limb. What advantage, it is asked, would there be in taking out the synovial membrane alone if the disease had involved the bone and invaded the epiphyseal line. Out of thirty-nine cases of arthrectomy published by Wright and Müller there had been but three complete recoveries. There are cases, it is allowed, in which the disease being limited and within reach, a good deal might be done by removing the synovial membrane, but in these the diagnosis is not always easy. The after-treatment in cases of arthrectomy is frequently very prolonged, and contrasts unfavourably with the usual result of excision of the knee, in which the patient, retaining a stiffened well-developed limb, is able to move about in a short time with a definite termination to his trouble. Mr. Kendal Franks, in some subsequent remarks, stated that he regarded it as an entire mistake to put erasion in opposition to excision. The two operations, though done for the same disease, ought to be done at entirely different stages. It being granted that erasion, or arthrectomy, promised to be of great value in disease of the knee, excision of the joint would be indicated when the disease had spread to such an extent as to necessitate removal of bone. Whilst excision of the knee had found favour, as being a conservative measure, to save the limb from amputation, erasion would go a step further in the direction of conservatism, and preserve the limb from excision. Arthrectomy, Mr. Franks thinks, will hold its own when practised in early stages of disease of the knee. W. JOHNSON SMITH.

2223. *Terrillon on the Treatment of Goître by Interstitial Injections of Tincture of Iodine.*—In carrying out the treatment of goître by means of interstitial injections of tincture of iodine it is necessary to bear three points in mind, viz.—1. To make sure that the needle has actually penetrated the body of the gland before injecting. 2. To avoid the veins which ramify in the cellular tissue in the front of the neck. The best plan is to get the patient to make a violent effort during which the veins enlarge and become visible. 3. It is of extreme importance to ensure the absolute cleanliness of the needle so as to avoid introducing microbes into the interior of the gland, for which purpose the syringe should be taken to pieces and boiled just previous to use. When all is ready the needle should be slowly but firmly pushed into the body of the gland to the depth of an inch or more, its entry into the gland being ascertained by the fixation of the needle. Then unscrew the syringe and see if any blood comes away; if so, then it has probably traversed a vein, and the needle must be withdrawn and plunged in afresh. If no blood escape, then the injection may be made forthwith, emptying the syringe very gradually. The tincture of iodine should be freshly prepared, and the first injection need not exceed from eight to ten drops. If that quantity be well borne, the next may be double the amount. The needle should not be immediately withdrawn, time being allowed for the solution to permeate the tissues so that it may not follow the needle and escape into the cellular tissue. Iodism may be avoided by not repeating the injection oftener than once in four or five days. Pain, of variable severity and extent, may be complained of, but rarely lasts very long. In the course of a day or two the gland may become somewhat enlarged, due to the inflammation caused by the injection, but this very seldom goes on to suppuration, which is only to be feared when proper precautions have not been taken to secure asepsis. In some instances a cure has been known to follow a single injection, but in others from fifteen to twenty have been necessary to reduce the size of the gland to its normal dimensions. The effect of the iodine is to cause the elements of the tissue to undergo fatty degeneration and absorption, and the irritation leads to the formation of cicatricial tissue, the contraction of which brings about a diminution in the size. Other liquids than tincture of iodine will produce the same effects, but this agent has the advantage of not giving rise to troublesome complications and of securing very excellent results. M. Terrillon, when in charge of the ward of a colleague, had commenced the iodine treatment in a case of goître which the latter, on his return, decided to extirpate, with the result of causing the death of the patient. He was thus enabled to examine the gland and observe the topical effects of the injections. At the site of the earlier injections there were nodules of cicatricial tissue, the later ones still having some tincture of iodine in their centre with a surrounding zone of inflammation. Occasionally an apparent cure is followed, after some time, by a fresh increase in volume of the gland, due to the fact that the needle had not penetrated the deeper parts which continued to increase in size. In such cases the remedy is obvious and easy. ALFRED S. GUBB.

2224. *Borsuk on the Transplantation of Large Strips of Skin in Crural Ulcers.*—In the Polish weekly *Gazeta Lekarska*, No. 14, 1889, p. 300, Dr. Maryjan Borsuk, house-surgeon to the Infant Jesus's Hospital, Warsaw, publishes a very instructive case of crural ulcer, successfully treated by skin-grafting after Thiersch's method. [*Vide* Dr. E. Plessing's paper in the *Archiv für klinische Chirurgie*, vol. xxxvii., fasc. 1; F. C. Husson's leader in the *Annals of Surgery*, April 1889, p. 290; as well as Professor Thiersch's first communication in the *Centralblatt für Chirurgie*, 1876, p. 17; Nagel's paper in the *Beitrage zur klin. Chirurgie*, vol. iv., p. 339.—*Rep.*] The patient, a fairly well-nourished and generally healthy woman, aged 50, with some old traces of arthritis deformans about various joints, sought admission on account of an ulcer situated on, the anterior and inner aspect of the lower half of the left leg, and measuring 16 × 15 centimètres. Its edges were hard, the floor covered with profuse granulations. Notwithstanding almost incessant treatment, the ulcer had persisted for thirty years, to ultimately bring the woman to despair; in fact, to get rid of her sufferings, the unhappy patient resolved to have her leg cut off without any further delay. As an alternative, Thiersch's operation was resorted to. For two days preceding the latter, the ulcer, as well as the patient's left arm and right thigh, from which the strips of skin were to be removed, were disinfected by compresses soaked in a 3 per cent. solution of carbolic acid. The operation was conducted under chloroform and antiseptic precautions. Having applied an Esmarch's bandage on the left lower limb, the author freely sliced away luxuriant granulations as well as hard edges, and then proceeded to transplant the grafts after the following plan suggested by Dr. Matlakowski. The strips, measuring each 9 to 16 × 2 to 3 centimètres were sliced off by means of a thin and narrow amputation knife, in such a manner that they remained neatly spread over the blade. Then the slice was lifted up with a piece of sticky protective and transferred to the ulcerated surface, after which the protective was cautiously separated from the graft. In all, eight strips were transplanted in that way, and laid side by side, slightly overlapping each other. The whole ulcer, except an area measuring 3 × 4 centimètres, was covered with the slices, the gap being left for making some contemporaneous clinical observations concerning the healing process under simple antiseptic dressing, on one side, and that under cutaneous grafts, on the other. The grafting over, the parts were covered first with silk, then with iodoform gauze, again with silk (soaked in a 2 per cent. carbolic solution), and ultimately with hygroscopic cotton-wool, the whole being fixed with a slightly compressing roller-bandage. The dressing was changed for the first time on the fourth day, but subsequently once or twice daily. Except two spots, not larger than one square centimètre each, which sloughed, all the grafts soon became firmly adherent and retained their vitality. In three weeks the whole ulcer was found to be soundly healed, except the said defective area. The latter was now similarly covered with a slice, and healed in another three weeks. Dr. Borsuk adds that he has tried the same operation in two other cases of large crural ulcers, the results being equally brilliant. [A valuable paper on the transplantation of large strips of human and frog skin, by Dr. George B. Fowler, of Brooklyn, may be found in the *Annals of Surgery*, March 1889, p. 179.—*Rep.*]

V. IDELSON, M.D.

THERAPEUTICS.

RECENT PAPERS.

2225. KRÜTOVSKY, DR. VLADIMÏR M.—On the Treatment of Bronchial Asthma. (*Novostï Terapiï*, No. 12, 1889, p. 178.)

2226. MALSHIN, DR. ALEXANDR I.—On Sulphonal as a Hypnotic in Insanity. (*Kovalevsky's Arkhiv Psikhiatriï*, vol. iv., 1889, p. 450.)

2227. ARKHANGELSKY, DR. PAVEL I.—Antipyrin in Diabetes Insipidus, Urticaria, and Bronchial Asthma. (*Meditz. Oboz.*, No. 10, 1889, p. 1,000.)

2228. POPOFF, DR. SERGHËI.—On the Treatment of Diphtheria. (*Novostï Terapiï*, Nos. 22 and 23, 1889, p. 324.)

2229. MURRAY.—The Removal of Renal Calculi by Doses of Belladonna. (*Provincial Med. Jour.*, October 1889, p. 582.)

2230. HAY.—On Paraldehyde and Sulphonal. (*American Jour. of Med. Sciences*, July 1889.)

2231. Chloralamide.

2232. GILLAR, DR. (Wischaw).—Collection of some Recent Prescriptions. (*Med. Chirurg. Centralbl.*, No. 40, 1889.)

ART. 2225. *Krütovsky on Quebracho in Bronchial Asthma.*—In the *Novostï Terapiï*, No. 12, 1889, p. 178, Dr. Vladimïr M. Krütovsky, of Krasnoiarsk, Siberia, relates an exceedingly severe and refractory case of bronchial asthma (in a woman of 30), in which, after morphine, hydrate of chloral, cocaine, iodine, bromine, atropia, pyridine, and other usual anti-asthmatic means had failed to afford any amelioration, he prescribed quebracho in the following combination: ℞ Decocti quebracho ext., ʒiij., par. ℥vj.; potassii iodidi, ℈ij.; tincturæ opii benzoicæ, ʒij. M. D.S. A tablespoonful every two hours. The paroxysms rapidly ceased. On discontinuing the mixture, however, they returned, though in a very mild form. After two or three doses the symptoms again vanished without trace. Not a single attack occurred during the subsequent six months (up to the date of the communication), the patient apparently continuing to take the medicine all the while. [Tinctura opii benzoica s. elixir paregoricum *Ph. Ross.* is prepared of 1 part of powdered opium, 4 pp. of benzoic acid, 2 pp. of camphor, and 2 pp. of anise-oil, which are dissolved in 192 parts of a 70 per cent. rectified spirit of wine. Two hundred parts of the tincture contain 1 part of opium.—*Rep.*]

2226. *Malshin on Sulphonal as a Hypnotic in Insanity.*—In the *Kovalevsky's Arkhiv Psikhiatrii*, vol. iv., 1889, p. 450, Dr. Alexandr I. Malshin, of Moscow, describes his observations on the new hypnotic, conducted on thirty inmates of the Prëobrajensky Asylum. The remedy was given between 6 and 7.30 P.M., in two-gramme (half a drachm) doses, well diluted with hot tea or soup. The author draws the following deductions from his clinical experiments :—1. Given in the manner indicated, sulphonal is readily taken by the patients. 2. In cases of organic cerebral disease, the hypnotic effects of the drug are almost nil. 3. In non-organic cases it usually induces sleep which comes on from one to three hours after a dose, lasting, in the majority of cases, from two to twelve hours. 4. After awaking, the patients always feel a kind of lassitude and drowsiness, and sometimes complain of headache and a kind of intoxication. During the next night they usually sleep a few hours without any hypnotics. 5. The ingestion of a two-gramme dose is followed, in a majority of cases, by the appearance of a very unsteady gait, with inability to stand and speak. Three-gramme doses give rise to the symptoms invariably. 6. Tendon reflexes are always found to be diminished. 7. Sulphonal causes a very considerable general weakness, while in organic cases it also weakens the patient's pulse. 8. 'It does not act, apparently, on the patient's mental state' (presumably, on morbid symptoms.—*Rep.*). 9. On the whole, sulphonal hardly can be regarded as a very sure and satisfactory hypnotic remedy. [Dr. L. G. Bütchinskaia's observations seem to point in the same direction. *Vide* the LONDON MEDICAL RECORDER, June 1889, p. 241.—*Rep.*]

2227. *Arkhangelsky on Antipyrin in Diabetes Insipidus, Urticaria, and Bronchial Asthma.*—In the *Medits. Oboz.*, No. 10, 1889, p. 1,000, Dr. Pavel I. Arkhangelsky, of Oboian, reports three cases of vaso-motor neurosis in which he successfully resorted to antipyrin as a vaso-constricting and sedative means. One of the cases is that of diabetes insipidus (which the author, in common with Professor H. Eichhorst, regards as a vaso-motor affection of the kidneys) in a soldier of 29 ; the daily quantity of the urine amounting to 7 litres. Antipyrin was administered in a daily dose varying between 30 and 75 grains. By the end of three weeks, the quantity of the urine gradually fell to 3·5, and subsequently to 3 and 2 litres a day. In all, during two months, the patient took 1,130 grains of the remedy, and that without any disagreeable accessory effects. The improvement seems to be permanent (about six months have elapsed since the discontinuance of the remedy). Another case refers to an anæmic and nervous spinster of 30, with chronic urticaria of four years' standing, the rash (all over the body) appearing nearly every morning and evening and lasting each time for about four hours. The treatment by iron, arsenic, bromides, quinine, &c., having utterly failed, antipyrin (in 10-grain doses, one or two hours before the time of the attacks) was administered. A striking improvement set in after the few first doses. In less than two months complete and permanent cure followed. The third patient was a gentleman of 53, with most severe bronchial asthma, caused, probably, by pressure (of an incipient aneurysm or mediastinal tumour) on the bronchi and recurrent vagi. The patient ultimately died, but antipyrin (10 or 15 grains, two or three times daily) always afforded a striking alleviation of the dyspnœa, headache, and other subjective symptoms.

2228. *Popoff on the Treatment of Diphtheria.*—In the Moscow weekly *Novosti Terapii*, Nos. 22 and 23, 1889, p. 324, Dr. Serghëi Popoff, of Ust-Kamennogorsk, Siberia, writes that in early stages of faucial diphtheria he successfully resorts to the following therapeutic combination. 1. The parts affected are freely sprinkled (by means of a moistened brush) with powdered salicylic acid, twice daily. 2. Simultaneously, steam inhalations of turpentine-oil are made hourly after the formula. ℞ Olei terebinthinæ rectificati ʒj. ; spirit. vini ʒvj. ; aq. destillatae ℥vj. M.D.S. A tablespoonful at a sitting. 2. In the intervals the throat is gargled with a 5 per cent. solution of boracic acid in distilled water, or with a mixture of distilled and lime-water in equal parts. 4. The cervical glands are painted with some iodine ointment and kept covered with cotton-wool. 5. Internally, liq. ferri perchloridi [ferrum sesquichloratum solutum *Ph. Ross.* = perchloride of iron and distilled water in equal parts.—*Rep.*] with glycerine in equal parts, is given, from 3 to 4 drops of the mixture every two hours. 'A quinine solution' (no details) is likewise prescribed. 6. Finally, a liberal nutritious dietary is ordered. V. IDELSON, M.D.

2229. *Murray on the Removal of Renal Calculi by Toxic Doses of Belladonna.*—In the *Prov. Med. Jour.*, October 1889, p. 582, Dr. Murray states that, in his experience, belladonna is more beneficial than opium in relieving the pain of renal colic. In cases of renal colic, moreover, the author contends that if the drug is pushed sufficiently long and in large enough doses, the entire removal of the calculus—first from the pelvis of the kidney to the bladder, and then from the bladder *per urethram*—often follows. Some cases are quoted illustrating this assertion. One patient had suffered for several months from repeated attacks of renal colic, during the last of which he was seen by the author, who gave belladonna until its physiological action on the eye and throat was evident, and then it was pushed further, so that in a few hours a lithic acid calculus was passed as large as an almond. In another case a youth suffered so severely from renal pain, that it was decided to operate, but, before consenting, the parents consulted Dr. Murray ; he ordered twenty drops of tincture of belladonna every hour, and at the end of five hours a round rough calculus was passed. The special point to be remembered in these cases is to push the drug to its toxical stage, and keep up its action after the pain has been relieved, until a fair time has been allowed for the expulsion of the stone. You may begin with forty minims of the tincture, and repeat it every two hours, increasing or diminishing the dose according to its effect on the pain.

2230. *Hay on Paraldehyde and Sulphonal.*—In the *Amer. Jour. of the Med. Sciences*, July 1889, Dr. Hay contributes an article on the value of sulphonal in comparison with that of paraldehyde, and from his clinical experience suggests the following conclusions :—Paraldehyde is the safer hypnotic where a continuous action is required, and it has a wider range of application in mental diseases than sulphonal, and in the insomnia of acute or chronic disease, when pain, cough, dyspnœa, or fever exist, sulphonal is less effectual than paraldehyde. In all depressed mental states sulphonal acts ineffectively, and acute melancholia should be a contra-indication to its use, while in maniacal conditions it is more satisfactory than paraldehyde. The use of sulphonal in general paralysis of the insane should be carefully considered. Sulphonal is contra-indicated in a high degree of physical debility with insomnia. In 18 per cent. of cases various degrees of sulphonal-intoxication appear, and it would seem that this drug is capable of being dangerous to life, and therefore the commencing doses should be small, some persons being extremely sensitive to its influence. The effects produced by sulphonal are not always in proportion to the dose administered, and in some cases it very seriously interferes with the normal bodily secretions, while paraldehyde does so to a very much less extent.

RICHARD NEALE, M.D.

2231. *Chloralamide*, the new hypnotic, may be given—1, pure, in a wafer or mixed with a confection. In this case the patient should be directed to drink milk, water, or coffee immediately after its ingestion. 2. In suspension, as in the following formula :—℞ Chloralamide, 30 to 40 grains; acid. hydrochlor. dil. ♏ij. ; syrup of raspberries, ʒiij. ; distilled water, ℥ij. For one dose. 3. It may also be given *per rectum* : ℞ Chloralamide, 30 to 40 grains ; acid. hydrochlor. dil. ♏ij. ; cognac, ♏xvj. ; distilled water, ℥iij.

ALFRED S. GUBB.

2232. *Gillar on Collection of some Recent Prescriptions.*—In rachitis, caries, scrofula, and coxitis : ℞ Ferr. arsen., 0·06 ; lact. ferr., ferr. carb., āā 0·60 ; pulv. rhei, calc. phosphor., elæos. menth. pip., āā 3. Dose on the point of a knife.

A gargle for catarrh of the pharynx : ℞ Sulph. zinci, 1 ; thymol, 0·02 ; spir. vini rect., glycerini pur., āā 5 ; aq. menth. pip., 300.

In angina and stomatitis : ℞ Saloli, 6 ; spir. vin. gall., 100. A teaspoonful in a tumbler of warm water for gargling.

A narcotic for enema : ℞ Amyl hydrat., 3 ; aq. distill., gummi arab., āā 25. A paste for eczema of the skin and eyelids : ℞ Acid salicyl., 1 ; oxyd. zinci, amyl pur., āā 5 ; vasel. flav., 10.

Pills for incontinence of urine : ℞ Ext. nucis vomic., 0·24 ; ferr. oxydul. oxydat., 3 ; pulv. e lign. quass., 3 ; syr. absynth., q.s. ut f. pil. xx. From 1 to 3 pills daily.

In hæmorrhage of the uterus : ℞ Ext. cannab. ind., 0·50 ; ext. secal. corn., 4 ; ext. liq. hamamel., tinct. canelæ, āā 15. A teaspoonful three times a day.

Injection in blennorrhœa : ℞ Zinci sozoiodol., 2 ; aq. destill., 100.

Pills for pulmonary tuberculosis : ℞ Iodi., 0·01 ; ext. nuc. jugl., 0·20 ; fiant pil. 60. Two pills at night.

For itch in adults : ℞ Creolin, 15 ; axung. porc., 100 ; sapon. med., 50 ; cret. alb., 5.

For itch in children : ℞ Creolin, 5 ; bals. Peruv., 100.

In chlorosis and hysteria : ℞ Ferr. citric., 4 ; kal. brom., 10 ; vini malacens., 250. A tablespoonful before dinner.

For excessive vomiting in pregnancy : ℞ Kal. iodat., 6 ; tinct. iodi., gtt. vi. ; aq. distill., 120. Three tablespoonfuls daily.

A snuff for scrofulous catarrh of the nose : ℞ Zinc. sulfo-carbol., 0·30 ; bism. salicyl., 4 ; iodol., 3 ; zinc. tann., 2 ; talci pulv., 10.

A single dose for neuralgia trigemini : ℞ Antipyrin and kal. bromat., āā 1·50 ; tinct. strophant. sem. gtt. unam., aq. destill., and syr. rub. idaei., āā 15.

Pills for bronchoblennorrhœa, from 3 to 6 daily : ℞ Natr. benz. and terpinol., āā 1 ; sacch. alb., q.s. ad pil. 50.

A single aperient dose : ℞ Ol. ricini, 30 ; syr. rhei. 20 ; spir. vini rect., 15 ; ol. menth. pip. gtt., duas.

For dropsy in connection with heart-disease, 3 powders daily : ℞ Calomel, 1·20 [pulv. laud., 0·10] ; pulv. f. digital. and pulv. squillæ, āā 0·40 ; sacch. albi., 2 ; pulv. div., in doses 6.

A powder for perspiring feet : ℞ Naphthol. pulv., 2 ; amyli. pur., 100.

In diabetes mellitus, to sweeten food, take as much as will lie on the point of a knife : ℞ Saccharini, 5 ; bicarb. sodæ, 2.

A salve for psoriasis and herpes tonsurans : ℞ Anthrarobini, 10 ; ol. oliv., 30 ; lanolin, 60.

In rheumatism and asthma, 10-30 drops daily in a large quantity of water : ℞ Ammon. sulfo-ichthyol., 10 ; aq. destill., 20.

For tape-worms, to be taken before breakfast : ℞ Ol. croton, gtt. 1 ; chloroform, 4 ; glycerini, 30.

A salve : ℞ Acid. boric., 2 ; vaselin. alb., 30 ; glycerini, 3.

A paste for acne, to be spread on the skin to the thickness of a knife-blade, and to be rubbed off in a quarter of an hour, when the skin must be dusted with talc : ℞ Naphthol., 10 ; sulf. precip., 50 ; lanolini and sapon. virid., āā 25. M. Leniter terendo f. pasta.

JOHN ELLIOTT.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

2233. KRUKENBERG, DR.—Extirpation of a Cancerous Ovary in a Child aged Eight. (*Berlin. klin. Wochensch.*, No. 42, 1888 ; *Revue des Sciences Médicales*, Oct. 15, 1889.)

2234. HAMAKER, DR. W. D.—A Case of Ovarian Tumour in a Girl Seven Years Old : Ovariotomy : Recovery. (*New York Med. Record*, Sept. 14, 1889, p. 288.)

2235. SIMS, DR. H. MARION.—The Non-retention of Urine in Young Girls and Women. (*American Jour. Obstet.*, September 1889, p. 917.)

2236. WALZBERG, T. (of Minden).—Contributions to the Pathology and Diagnosis of Abdominal Tumours. (*Berlin. klin. Wochensch.*, 1888, No. 50.)

2237. JOHNSON, DR.—On a Case of Menstrual Epilepsy Cured by Removal of the Appendages. (*Arch. of Gyn.*, September 1889.)

2238. WACKERHAGEN, DR.—On a Case of Ovariotomy. (*Arch. of Gyn.*, September 1889.)

2239. STEVENS, DR. E. B.—On Two Cases of Hand Presentation. (*Obstet. Gaz.*, September 1889.)

2240. GUÉNIOT, DR.—On the so-called Incoercible Vomiting of Pregnancy. (*Rev. de Thérap.*, Oct. 1, 1889.)

ART. 2233. *Krukenberg on Ovariotomy for Cancer of the Ovary in a Child aged Eight.* — A child aged 8, was subject, for a year before operation, to an abdominal tumour, without ascites. Abdominal section was performed and an ovarian tumour, the size of a child's head, was removed. The pedicle was very long and very vascular. The opposite ovary was healthy and the patient made a perfect recovery. The tumour proved, on microscopic examination, to be a true cancer.

2234. *Hamaker on Successful Ovariotomy in a Girl aged Seven.*—The child had been in good health till April 1888, when she began to feel ill and suffer from pain in the left iliac region. In August, swelling was observed and the abdominal veins were distended ; there was much dyspnœa. At the operation a multilocular tumour of the right ovary was discovered. There were omental adhesions, and the parietes adhered slightly to the cyst at a point where tapping had been performed two months previously. But little shock followed the operation. No catheterisation was required. On the second day, morning temperature was 100°·4, evening 99°·4, pulse 132. Half an ounce of milk was allowed every two hours. On account of pain and restlessness some bromide of potassium was given. On the fourth day, at 10 P.M., the child, after crying violently for food, fell asleep and had a profuse cold sweat, with symptoms of collapse. The milk had been increased to two ounces every two hours. After the sweat the temperature was 97°. Whisky and milk were administered. On the fifth day beef-tea was given ; on the sixth the wound was dressed and a purgative prescribed (ol. ricini, syrup. rhei aromat., āā fl. ℥j). The stitches were removed on the eleventh day. On the twenty-second day the child sat up ; her ultimate recovery was perfect. [For references to cases of ovarian tumour and ovariotomy in infancy and childhood *see* LONDON MEDICAL RECORDER, 1888, p. 522, Art. 1164.] The following case (*American Jour. of Obstetrics*, vol. xiii., p. 118) has been overlooked by most writers on the subject. Dr. T. Gaillard Thomas exhibited before the Obstetrical Society of New York, Oct. 7, 1879, an ovarian cyst removed after death from a child 3½ years old. The child was delivered at term, when nothing abnormal was discovered. One month after birth a tumour was detected in one iliac fossa, about the size of a hen's egg. The child, well developed at birth, soon began to show signs of impaired nutrition, grew very slowly, became emaciated, languished till she was 3 years and 5 months old, and then died. A necropsy revealed the existence of an ordinary ovarian cyst filling the abdomen. The remains of the Fallopian tube and ovary lay on one side of the tumour. The surgeon will not forget that operating on an infant and operating on a little girl are two very different things. Experience has proved that ovariotomy on girls over four is a successful and justifiable operation. Ovariotomy on younger subjects has proved much less satisfactory (cases of Neville, Alcott, Hooks, &c., all fatal). The Römer-Küstner case, where the child was 1 year and 8 months old, recovered. Should ovariotomy be done at birth? One case of double ovarian tumour in a seven months' child will appear in the coming (fortieth) volume of the *Transactions of the Pathological Society*. The infant lived but a few minutes. The hazard, even in a vigorous child born at term, must be great. Yet an infant will stand abdominal section within one hour or two of birth very well. [*See* LONDON MEDICAL RECORDER, 1889, p. 130 and p. 312]

2235. *Sims on the Relief of Incontinence of Urine in Women.*—Dr. Sims has had under his care a number of cases of young girls unable to retain urine for over a very short period, and constantly liable to involuntary micturition during sleep. He has treated similar symptoms in elderly subjects who had previously suffered from cystitis, all inflammation having subsided. In all such cases, in the young and in the old (cystitis and morbid growths being entirely excluded) Dr. Sims found contraction of the walls of the bladder due to a hypertrophy of the muscular coat. The holding capacity of the bladder was consequently much reduced. He examined, eight years since, the bladder of a young lady, aged 17, suffering from a very severe form of the affection in question. The bladder measured but 2¾ inches from the meatus to its posterior wall. A silver catheter was introduced into the bladder, and warm water was injected by means of a Davidson's (much resembling a Higginson's) syringe. The bladder only held 1¾ oz. at the first sitting. This treatment, which gave considerable pain, was continued daily, a little more water being injected every day. At the end of two months' treatment the bladder could hold 12 oz. of water, and, for the first time in her life, the patient awoke in a dry bed. At the end of three months, 18 oz. could be held without severe pain. The patient, as the capacity of the bladder increased, would only have occasional attacks of incontinence of urine during sleep. At the end of the three months she was cured, and has remained well ever since. Dr. H. Marion Sims treated in a similar manner a case where the patient was 50, and had suffered from cystitis several years previously. A saturated solution of boracic acid in water was employed for distension of the bladder. At the first sitting only 1 oz. could be held ; at the end of three months the bladder could retain 22 oz. The patient, before treatment, could not hold her urine for many minutes, and had to empty her bladder about thirty times at night. After treatment she could retain her urine for six hours. The cure appears to have been perfect.

2236. *Walzberg on Serious Complications before and after Ovariotomy, &c.*—A woman suffered from suppuration of an ovarian cyst with return of high temperature during convalescence from typhoid fever. As the patient was in a very unfavourable condition for operation, Dr. Walzberg tapped the tumour. He was compelled, however, to operate before the patient's health had improved to any marked extent. Recovery after removal of the tumour was uninterrupted. The patient died of cancer of the liver four months after ovariotomy. In a second case, an ovarian cyst was tapped to make sure of diagnosis. Fever, universal jaundice, and exudative pleurisy followed. All these complications were attributed, by Dr. Walzberg, to escape of some of the contents of the cyst into the peritoneum. Ovariotomy was performed and the patient recovered. Dr. Walzberg performed extraperitoneal hysterectomy for uterine fibroid with success on one woman who was seized with subacute anterior poliomyelitis two months after discharge from hospital. The spinal disease gradually subsided. An abdominal cyst, in another case, was punctured, and ovarian disease diagnosed. Abdominal section was performed, and then it was found that the cyst was hydatid. The site of puncture was discovered, the cyst laid open at that spot, and its edges sown to the peritoneum, washed out with a solution of chloride of zinc and drained. The patient recovered.

ALBAN DORAN.

2237. *Johnson on a Case of Menstrual Epilepsy cured by Removal of the Appendages.*—Miss C., aged about 25, had been a sufferer from menstrual epilepsy and complete suppression of the menses for a number of years. The uterine appendages were known four years ago to be in a state of chronic inflammation, and he advised their removal. Objecjection was made, and other treatment was resorted to. In one of her convulsions later on, she fell downstairs. As a result of her injuries, she remained unconscious three days; and, curiously enough, she had no more spasms, and a modified menstruation came on about the usual interval. For a period of three years and five months she was only able to void her urine through a catheter, which she finally learned to use for herself. A long course with the faradic current succeeded in restoring power to the bladder, but the ovaries increased in size and became very painful. An attack of pelvic peritonitis kept her in bed six weeks. She recovered sufficiently to sit up and walk about her room. This was all she could do. She had fever at night and frequent exhausting night sweats. Indeed, she presented all the symptoms of chronic septicæmia. She evidently had a collection of pus somewhere, and it was giving rise to the usual symptoms. An operation was decided upon, when one ovary was found to have been converted into an abscess holding four pints of horribly offensive pus. The other ovary was the size of a lemon. The ovaries and tubes on both sides were removed, the abdominal cavity was thoroughly washed out, and a glass drainage-tube left in. The wound was closed and dressed in the usual way. The patient made a slow recovery, but finally got well, and was able to return home seven weeks after her operation. She was seen some months later and looked well and hearty, having gained over twenty pounds and acquired a healthy colour. From being house-bound for six months, and a suffering, hopeless invalid for six years, she was then quite able to help herself, and did all the housework.

2238. *Wackerhagen on a Case of Ovariotomy.*—The patient, a married woman 26 years of age, the mother of three children, first noticed an enlargement of the abdomen in July 1887, which steadily and then rapidly increased in size. She consulted a physician, who diagnosed placenta prævia, and attempted to bring on premature labour, but without success, *et pour cause*, as the subsequent history shows. When Dr. Wackerhagen examined her, he at once diagnosed ovarian tumour. The patient gave a history of frequent attacks of malaria, and latterly had suffered from chronic constipation. Two days before the operation the bowels were thoroughly moved, and beef tea and peptonised milk only were given as nourishment. On the morning of the operation an enema of soap and water and assafœtida was given, followed by a warm bath and a suppository, one-third of a grain of morphia. The patient having been anæsthetised, an incision about four and one half-inches long was made in the middle line of the abdomen, between the umbilicus and the symphysis pubis. Upon reaching the peritoneum, it was found to be adherent along the whole line of incision to the omentum, and this was adherent to the anterior wall of the tumour, which was very thin in this location. The tumour wall was accidentally nicked with the knife, causing a discharge of pus, some of which entered the abdominal cavity before it could be prevented. It was, however, quickly washed away with boro-salicylic solution. No other adhesions were found; the tumour was removed, and the pedicle tied with No. 12 silk ligature, the stump was cauterised, and returned to the abdominal cavity. The abdominal cavity was thoroughly washed by using three gallons of boro-salicylic solution, and the wound closed. The cavity having been so carefully cleaned, it was not thought necessary to use a drainage-tube. A hypodermic injection (7 minims) of morphine was given on her recovering from the anæsthetic, and her diet was carefully regulated. On the second day the temperature rose to 101°·2 F.; on the third day to 102°·5 F., and on the fourth to 102°·6 F. Patient was restless, but complained of no pain. Endeavours were made to procure an action of the bowels by enema and by means of mag. sulph. by the mouth, but without effect. Examination *per vaginam* revealed nothing abnormal, but the abdomen was markedly tympanitic. On the seventh day the temperature rose to 103°·2, and occasional sharp pain in the umbilical region was complained of. The enema was repeated, and was followed by a very small evacuation of a dark liquid character, but after the injection the patient went into collapse, from which she only recovered after hypodermics of brandy, atropia, and ammonia. Feeling that there was some abnormal obstruction, it was proposed to the patient, after she had rallied, to allow a reopening of the abdomen in order to relieve it. The preparations having been completed, the patient again went into collapse, from which she had only partially recovered when the etherisation was commenced. The abdominal cavity was reopened. It was found necessary to enlarge the original incision, and also to puncture the large intestine, which was so greatly distended with gas that it was impossible to determine the seat of obstruction. This was found to be a volvulus of the large intestine and an adhesion of the tip of the vermiform appendix to the sigmoid flexure of the colon, which was distended with gas and displaced to the right. Under this a portion of intestine had fallen and become constricted. There had been a slight amount of local peritonitis, sufficient, however, to cause adhesion of the end of an unusually long vermiform appendix. As soon as the adhesion was loosened the intestines resumed their normal position, but the patient suddenly expired while the wound was being closed. The author expresses the belief that if he had administered a saline cathartic on the second day after the operation the adhesions would not have formed, and the intestinal obstruction might have been prevented.

2239. *Stevens on Two Cases of Hand Presentation.*—Dr. Stevens, by a curious coincidence, was called in one day to two labours, both of which were complicated by presentation of the hands. The first patient was in labour with her seventh child. The pains set in violently, and the membranes ruptured almost at once. On examination he found a head presentation, but just in advance of the occiput were both hands, the arms being fully extended. By rapid manipulations in the intervals between the pains, he ultimately succeeded in crowding both hands sufficiently behind the forthcoming head, so that a strong pain shot the head in advance of the hands, and delivery soon after was completed. The same evening he was summoned by a fellow practitioner to another case of 'arm presentation.' After an undetermined period of labour, the patient was found with a completed arm presentation, and, owing to the fact that the amniotic fluid had long since drained away, great difficulty was experienced in effecting podalic version. The fœtus was hydrocephalic, and was provided with an enormous spina bifida, running the entire length of the spine.

2240. *Guéniot on the so-called Incoercible Vomiting of Pregnancy.*—In the author's opinion, the idea of resorting to any single remedy to overcome the obstinate vomiting of pregnancy is erroneous and futile. The numerous observations published up to the present show that relief has been obtained by the most diverse therapeutical means, none of which rejoice in a constant, or even a habitual, efficacity. He points out that the source of the vomiting may reside in the uterus, the nervous system, or the stomach. Consequently, any treatment to be attended with even a moderate success must bear on the three systems simultaneously—viz. 1., Allay the abnormal excitement of the uterus by remedying the pathological conditions which are the cause of it. For this purpose he uses belladonna, cocaine, morphine, dilatation of the cervix, &c. 2. Diminish or suppress the exaltation of the reflexes by refrigerants along the spine, the bromides, &c. 3. Combat gastric irritability by suppressing acid drinks and substituting alkaline waters, a flying blister to the epigastrium, and the use of laxatives.

ALFRED S. GUBB.

DERMATOLOGY.

RECENT PAPERS.

2241. MORROW.—On the 'Ava' Skin. (*Journ. of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 80.)

2242. HALLOPEAU.—On Paget's Disease. (*Ibid.*, No. 81.)

2243. RUSSELL.—On Non-Pruritic Lichen Planus following Amputation. (*Ibid.*)

2244. ROBINSON.—On Xanthoma Diabeticorum. (*Ibid.*)

2245. SCHIEFF.—On Eczema in Childhood. (*Ibid.*)

2246. BROCQ.—On Symmetrical Lichen Pilaris of the Face. (*Ibid.*)

2247. SHERWELL.—On Lupus Erythematosus. (*Ibid.*, No. 83.)

2248. BULKLEY.—On Eczema Orbicularis seu Circumscriptum. (*Ibid.*)

2249. BROCQ.—On the Treatment of Tuberculous Ulcerations. (*Ibid.*, No. 84.)

2250. MACKINTOSH.—On the Treatment of the Acute Stage of Eczema. (*Practitioner.*)

2251. MACKENZIE.—On a Case of Herpes Zoster. (*Med. Chronicle.*)

2252. SAUNDBY.—On two Cases of Urticaria Hæmorrhagica. (*Illustrated Med. News*, September 1889, p. 229.)

2253. HANDFORD.—On Hydroa Vacciniforme. (*Illustrated Med. News*, October 1889, p. 25.)

2254. UNNA.—On Seborrhœa. (*Deutsche med. Zeitung*, No. 59, 1889.)

ART. 2241. *The 'Ava' Skin at the Sandwich Islands.*—The editor of the *Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 80, states that he first observed the condition named 'ava skin' amongst lepers, who took 'ava'—a slightly narcotic intoxicating drink made from the root of the ava—as a remedy against leprosy. It produces redness and dryness of the surface of the skin, with exfoliation of the epidermis in the form of white branny scales. The skin is loose and wrinkled from the apparent absorption of the subcutaneous layer of fat. In old ava drinkers the entire body becomes emaciated, and the skin covered with large scales, which, upon falling, may leave ulcerated surfaces, resulting in permanent scars. After prolonged cessation of the use of the drug, the skin may gradually return to its normal condition. The author believes this condition of the skin to be peculiar to the inhabitants of the Pacific Islands.

2242. *Hallopeau on Paget's Disease.*—Dr. Hallopeau (Jan. 31, 1889) (*Jour. of Cutan. and Genito-Urin. Dis.*, vol. vii., No. 81) presented to the weekly conference at the Hospital, St. Louis, two patients who have been attacked for the past seven or eight years respectively with the disease of the nipple called by the name of Paget. Wax casts, which had been taken of the condition in its previous stages, permitted the whole history of the cases to be taken in at a glance. He spoke of the localisation at the summit of the breast, the slow extension, the very bright red colour, the clearly marked external limits, the retraction of the nipple, and finally on the ultimate invasion of the mammary gland. He believes it to be an epithelioma of an altogether special form. Dr. Vidal had had three cases. He thinks the affection has nothing in common with eczema, although it is eczematiform. His histological examinations have shown him that there occurs a marked proliferation of epithelial cells towards the galactiferous ducts, and all about them a proliferation of fibrous tissue, which explains the retraction of the nipple. He, too, believes it to be a special form of epithelioma. In the beginning it can be treated by scraping and application of powdered chlorate of potash, just as in superficial epithelioma. Besnier had seen a large number of these cases in his private practice. The first sign of the beginning affection is, according to him, a horny crusting over the apex of the breast. When Paget's disease is already well advanced on one side, this crusting often exists on the opposite side. He believes there are several forms of Paget's disease; first, cases in which there is induration and retraction of the breast; these cases are severe, and operation should be undertaken at once by ablation of the diseased part and the whole of the gland; second, cases in which there is no induration or retraction of the nipple, and in which immediate intervention is not necessary. Dr. Quinquaud insists on the importance of the diagnostic point of superficial parchment (papyrané) induration of the affected parts.

2243. *Russell on Non-Pruritic Lichen Planus, following Amputation.*—Dr. C. P. Russell (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 81), states that a night-watchman, aged 44, with no history of syphilis, had the fingers of his right hand crushed by machinery, necessitating partial amputation of four. Shortly after the operation there appeared upon the flexor ,surface of the right wrist a number of pinhead-sized, round, hard, pinkish papules clustered in a group. Others appeared upon the flexor surface of the arm and forearm. There was no pruritus. About six months afterwards papules also appeared on the flexor surface of the left forearm and wrist. They were discrete hard lesions of a dusky red colour and non-pruritic. Near the end of the first year the disease began to appear on the lower dorsal and lumbar regions, and at varying times within the last four years scattered papules have developed upon the thighs, abdomen, chest, and shoulders, in which parts they are comparatively scanty. There is a distinct group in the centre of the chest over the gladiolus. The patient stated that the papules gradually enlarged till they were the size of split peas. They assumed a deeper red tint, became flattened and slightly angular in outline. The present condition of the eruption is substantially as described, the disease having invaded no new territory during the last three and a half years. The lesions at present vary in size between a pinhead and a split pea. Many show depressed centres and slight scaling. The colour varies from an ordinary red to a violaceous tint. Scattered amongst the fully matured papules may be seen small, irregularly shaped pigment-stains, which are of a muddy light-yellow tint. A peculiarity of these maculæ is that the surfaces have a slightly shrivelled look when viewed under oblique light.

2244. *Robinson on Xanthoma Diabeticorum.*—Dr. Robinson (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 81) presented an engineer, aged 31, suffering from this disease. The eruption first appeared three months ago on the buttocks. At present there were probably between a thousand and fifteen hundred tumours on the body. The lesions varied in size from a pinhead to a large pea, were firm, elevated, and seated in the corium. The small lesions were conical, or pointed, slightly reddish in colour. The large lesions were elevated, obtuse, or flat, smooth, or uneven on the surface, the furrows corresponding to the blood-vessel situation. Many of the largest lesions seemed to be made up of isolated yellow areas separated by hyperæmic tissue. The tumours were more or less round and were firm in consistency. Most of them began to develop around the hair follicle. Itching was at times marked. The tumours were situated chiefly over the gluteal and lumbar regions, on the extensor surfaces of the forearms, the anterior surfaces of the legs, and on the calves. Lesions were scattered over the trunk and limbs. The face was free, with the exception of a pinhead-sized tumour. The palms and soles were free. The urine showed a very large quantity of sugar.

2245. *Schieff on Eczema in Childhood.* — Dr. Schieff, writing upon the pathology and therapy of infantile eczema in the *Wiener med. Wochensch.*, No. 12, 1889 (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vii., No. 81), states that the study of the causes of the disease, and what many are pleased to call predisposition to it, is better carried out in the infant than in the adult. The author bases his paper upon 1,017 skin cases treated in the Vienna Children's Hospital, out of which number 449 were instances of eczema. Eczema capillitii gave 230, eczema faciei 57, eczema universale 30, &c. As regards etiology, it is especially noticeable that eczema appears most frequently in the first and second years of life, 136 cases in the author's table being put down for the first year, and 143 for the second. There are four reasons why this is so: 1. The thinness of the epidermis; 2. The superficial disposition of the papillary body and its plexus of vessels; 3. The comparatively greater turgescence of the skin in the infant compared with the adult; 4. The habitual hypersecretion of the glands of the skin. Although among external causes we must place in the first rank an accumulation and decomposition of the natural secretions of the skin, especially in children at the breast, still the number of sources of irritation is infinite. Among them must be mentioned too frequent bathing and rubbing, too long continued baths, maceration of the skin from sweat, acid and alkaline excretions left in contact with the skin, contact with secretions from irritated and inflamed mucous membranes, various physical and chemical agencies, too warm bed-clothing, piercing the ears, scratching occasioned by the burning and itching, such as vermin, scabies, and other conditions produce. When eczema has once broken out these conditions prolong and aggravate it and cause it to spread.

2246. *Brocq on Symmetrical Lichen Pilaris of the Face.*—Dr. Brocq (*Jour. of Cutan. and Genito-Urin. Diseases*, vol. vii., No. 81) presented (Feb. 21, 1889), at the weekly meeting at the St. Louis Hospital, a girl of 10 on whose face there has been developing by degrees since the age of 3 or 4 years an eruption which is now characterised as follows. The two principal patches are symmetrically situated above the internal portion of the brows. The eruptive elements touch each other and form a sort of red patch, on which are quite small projections of the size of the head of a fine needle. Between these two plâques are seen here and there disseminated the initial lesions. They are constituted by small acuminated projections, not coloured, and having usually a lanugo hair in the centre. They are seen to begin under the form of minute white points, slightly prominent and non-scaly. New ones form in their neighbourhood, so that they finally become grouped, the separate lesions touching each other, and from this time they are surrounded by a little redness. They are numerous upon the lateral regions of the cheeks, forming two large symmetrical plates, but there is here developed in addition a very fine and delicate vascular telangeiectasic condition. This new redness is especially marked at about eight millimètres in front of the ear, at which point the small acuminate projections are much less marked than towards the anterior parts of the cheeks, where they seem to become somewhat of the nature of acne. Some disseminated projections pass the border of the jaw and impinge upon the neck. Some are equally found upon the free border of the ear. Seborrhœa is found upon the scalp, and a lichen pilaris well marked upon the arms and legs. Internal treatment has consisted in the administration of arseniate of soda, in the dose of from four to eight milligrammes per day, and during the winter cod-liver oil in daily quantity of four soup-spoonfuls. Externally have been tried the application of compresses, wet, in a 30 per cent. solution of hydrochlorate of ammonia, Vigo plaster, cod-liver oil plaster, salicylic acid, &c. The author states that he applies to the face soft-potash-soap plaster, which is omitted on the skin showing signs of irritation. A calming pomade is then applied, followed by an ointment containing a gramme of tartaric acid and a gramme of salicylic acid in 30 grammes of glycerole of starch. The author states that the disease is essentially characterised, first, by its *début* in infancy and slow development; second, its very special localisation; third, by a lichenoid initia lesion of minute miliary size, little or no desquama tion, almost always pierced by a lanugo hair fourth, by a vascular element, which is at first purely erythematous.

2247. *Sherwell on Lupus Erythematosus.*—Dr. Sherwell (*Jour. of Cutan. and Genito-Urin. Diseases*, vol. vii., No. 83) presented an Irishwoman, aged 29, at a meeting of the New York Dermatological Society, who has suffered from this disease since 1877. It is distributed over the whole surface above the clavicles to the crown of the head, and occurs in small patches, with marked annular lesions, around the eyes. The efflorescences, never numerous, twice disappeared simultaneously. The disappearance or reappearance of the lesions did not occur at any particular time of the year. Most local remedies have been tried, and *raclage* of some of the lesions, but extension of the borders was always manifested afterwards. On account of their situation the lesions around the eyelids have precluded severe local treatment.

2248. *Bulkley on Eczema Orbicularis seu Circumscriptum.*—Dr. Bulkley (*Jour. of Cutan. and Genito-Urin. Diseases*, vol. vii., No. 83) presented a case of this affection at the New York Dermatological Society, to show the effect of the internal administration of ergot in large doses. N. M., aged 24, a Russian, presented himself at the New York Skin and Cancer Hospital (Dr. Bulkley's service) May 6, 1889. The eruption from which he suffered had been present for nine months. It began on the calf of the right leg as a circumscribed spot, the size of a five-cent piece, afterwards on the right arm above the inner condyle, then on the corresponding space on left arm. It appeared on other parts of the body. Examination showed a few pigmented, circumscribed, slightly thickened scaly spots on the neck, and some similar ones on back, shoulders, and chest. Lesions possessing the same characteristics were present on the upper and lower extremities, especially on the extensor surfaces. They were covered with scales or small crusts : very itchy. No weeping. The patient was ordered, May 6, to be given thirty drops of ext. fl. ergot three times daily, increasing the dose every day by five drops until ʒj. was taken three times daily. At the time the patient was presented—May 28—he was taking seventy-five drops three times daily. No bad symptoms had appeared, but the lesions had disappeared, leaving dark-brown pigmentation.

2249. *Brocq on Treatment of Tuberculous Ulcerations.*—Dr. Brocq (*Jour. of Cutan. and Genito-Urin. Diseases*, vol. vii., No. 84) states that he has experimented with lactic acid with the following results :—In lupus of the mucous membranes the effects are excellent. He believes that it is well to favour its action by lightly scraping the surface or scarifying the diseased area. Then the same day or the next to apply the lactic acid. The galvano-cautery can also be used, but in this case there should be a longer interval before the acid is applied. For lupus of the skin, if it is the ulcerating form, the lactic acid can be applied at once, but in non-ulcerating lupus it is indispensable to practise scarification beforehand, or at least by scraping or cautery to lay bare the tissues so that the acid may work energetically. In cases of deep-seated, long-standing lupus, accompanied with a noticeable thickening of the skin, he states that it has seemed to him that lactic acid had a certain useful effect, and favoured the removal of the diseased tissues. In cases of recent lupus, characterised by a few isolated grouped tubercles, the lactic acid applied after scarification hastens the cure, but leaves depressed cicatrices, which are noticeable, although without the least keloidal tissue being present, a result which would not be had if scarifications had been employed alone or combined with subsequent applications of Vigo plaster. Lactic acid is a most precious agent in the treatment of true tuberculosis and of lupus of the mucous membranes ; it can also render great service in cutaneous tuberculosis and in ulcerating lupus of the skin. It must be employed with caution in recent lupus upon exposed and prominent portions of the surface, as, for example, the nose. The results in these cases are apt to be inferior, so far as the cicatrices are concerned, to those obtained by linear quadrilateral scarifications combined with Vigo plaster. G. Thin, M.D.

2250. *Mackintosh on the Treatment of the Acute Stage of Eczema.*—In the *Practitioner*, Dr. Mackintosh makes some valuable suggestions on the treatment of eczema in its earlier stages. The first thing to insist upon is that the patient must not wash the affected part at all. In eczema of the head and face, the more essential parts to wash, such as the corners of the eyes and angles of the mouth, may be touched lightly with a small piece of soft sponge, made damp with cold water, and immediately dabbed dry. Coffee, strong tea, and alcoholic drinks should be forbidden. The second essential is to keep the bowels freely open. In the case of children, grey powder, rhubarb, and bicarbonate of sodium, a grain of each, taken as required every second or third night, will answer every purpose. In adults, salines hold the first rank, and sulphate of magnesium is by far the best of all purgatives. Three drachms should be taken an hour before breakfast, though it often acts as well if taken one hour before any other meal. The great desideratum is an appropriate external application, and the following answers in many cases with marked rapidity :—Bismuthi subnit. ʒij., zinci oxid. ʒss., glycerin. ʒjss., ac. carbol. liq. ♏xx., vaseline alba ʒvj. When constant tingling and irritation disturb the patient's rest at night, the following is useful applied by a camel's hair pencil :—Bismuthi subnit. ʒj., glycerin. ʒiv., acid. carbol liq. ♏xij., aq. rosa ad ℥j. If there be any reason why the patient cannot use an ointment during the day, the following powder is valuable :—Cimolite, bismuthi subnit., zinci oxidi, āā partes æquales. In more chronic cases the famous *unguentum metallorum* still holds its own. It consists of—Unguent. zinci, unguent. plumbi acetatis, unguent. hydrargyri nitratis, in equal parts. This ointment can be occasionally varied by substituting white precipitate for the nitrate of mercury ointment.

2251. *Mackenzie on a Case of Herpes Zoster.*—In the *Med. Chronicle*, Dr. James Mackenzie records the case of a servant, aged 18, who consulted him on account of pain extending down the right arm to the hand ; she first felt the pain on May 19, and on the 20th a rash appeared on the arm. When seen on May 24, she localised the pain to the outer half of the right upper arm, the radial half of the forearm, the ball of the thumb, and the thumb itself. There was also a good deal of pain in the back of the neck, from about the third to the seventh cervical vertebræ. Over the right arm were scattered a series of vesicular patches, but all within the area described by the patient as painful. There is also a vesicular patch on the ball of the thumb, and another small one on the inner aspect of the thumb itself. These herpetic patches on the hand are of rather infrequent occurrence, and some authorities go so far as to state that they have never found them. The eruption occupies the area supplied by the external cutaneous branch of the musculo-spiral nerve and by the musculo-cutaneous nerve.

2252. *Saundby on Two Cases of Urticaria Hæmorrhagica.*—In the *Illustrated Med. News*, Sept. 1889, p. 229, Dr. Saundby reports two interesting cases of urticaria hæmorrhagica. One patient was a woman, aged twenty-four, whose husband had left her about three months before she came to the hospital; consequently she had not been sufficiently fed. A week before admission she complained of pain in her feet, and noticed they began to swell, the skin being of a pink colour. Two days after, the knees became similarly affected, and next day the shoulders and elbows, and blotches of red appearing on the skin in several places. Then the hips began to be bad and the right eye swelled up. In each case the swelling of the affected joint lasted about two days, and as the swelling disappeared the spots began to change colour like bruises. On Aug. 29, when admitted to the hospital, she was suffering from great dyspnœa; there was crowing respiration, but the vocal cords did not seem to be implicated, as she could talk, and hot fomentations soon relieved the breathing. Next day she complained of pains in her joints, and the eyes were much swollen; the skin on the arms and legs was covered with red patches, and in places were large areas like bruises. She made a rapid recovery a few days after admission. The second case occurred in a girl, aged 13, who was admitted complaining of pain and swelling of legs and an eruption on them. Temperature 100° F.; pulse 10·8; respiration 24. Both legs swollen and tender, but not œdematous; joints tender, but no effusion in them. On the backs of the thighs and legs were a number of spots, varying in size from a sixpence to a split pea, mostly elevated, hard, and purplish-red in colour. On the arms there were only a few spots. In a few days the swellings had all gone, leaving stiffness, but she had a relapse after being allowed out of bed, which lasted about three days. Her temperature was never over 100° F., and the urine throughout contained a trace of albumen.

2253. *Handford on Hydroa Vacciniforme.*—In the *Illustrated Med. News*, October 1889, p. 25, Dr. Handford contributes notes of a case of hydroa vacciniforme. The patient was a boy, aged 7, and was first seen in May 1886. He was a healthy baby; at 2 years of age he had his first attack, limited chiefly to the forehead; the following year he had another outbreak, chiefly on the chin; each year since he has had one or more attacks. The eruption comes out in a series of crops for four or five months, generally beginning about April, and lasting till August or September; during the winter he is always free. His mother is quite convinced that the eruption is brought out by exposure to the heat of the sun. It commences in the form of small papules, about the size of a pin's head, and is surrounded by a very small and faint areola. The papules very speedily become vesicular or papular without increasing much in size. After that both the vesicle and areola grow, and in about twenty-four hours attain the size of a lentil or split pea. During the third twenty-four hours they continue to enlarge slightly, dry up in the centre, and become umbilicated; at this stage they exactly resemble a vaccination vesicle. By the third or fourth day the centre is usually of a dark-red colour; this does not appear to be due to the contents being sanguinolent, but to the vascular excoriated derma shining through the thin membranous vesicle. They vary in size from one-eighth to three-quarters of an inch in diameter, but many become confluent and form large bullæ, which eventually dry up into thick crusts. The discrete vesicles do not usually discharge, but gradually dry up, forming a scab, which falls off from the fifth to the seventh day, or later, leaving a whitish pitted cicatrix. The eruption is generally confined to the face and neck, but occasionally it appears also on the backs of the hands and the extensor surface of the forearms; but in both of these latter situations it is very rare. The ears are generally specially affected. There is very considerable itching and some pain, and sometimes during the purulent stage considerable swelling of the face occurs. The patient has now been watched for four years, and every summer a similar course of events has repeated itself. The ears have become somewhat hardened and thickened, and the face is covered with old pitted cicatrices, just like those of small-pox. There are a few cicatrices on the backs of the hands. Palliative treatment gives some relief during the height of the eruption, but no curative treatment has been found.

RICHARD NEALE, M.D.

2254. *Unna on Seborrhœa.*—Dr. P. S. Unna asks what is known about seborrhœa in the *Monatschrift für prakt. Dermatologie.* He says that our handbooks give the impression that seborrhœa is one of the best-known skin diseases. This, however, he proves to be a great mistake. For if the authors of those books do now and then, but very seldom, agree, it is when they rely on the thoughtless acceptance of old traditions. The doctrine that all seborrhœic affections are reducible to the sebaceous glands is exploded by our knowledge that the convoluted glands (knäueldrüse) yield more fatty secretion than the sebaceous glands. At any rate, it seems certain that seborrhœa oleosa and seborrhœa sicca must be regarded as two quite distinct processes, and that we must include in the popular term seborrhœa diseases which present no functional anomaly, but inflammatory, and particularly eczematous processes. To come to absolute certainty on these points, it will be necessary to answer the following questions:—1. What is the histological difference between a sebaceous gland-cell outside of the gland and a horn-cell embedded in fat? 2. Whence comes the cellular portion of the products of all seborrhœic affections? 3. Whence comes the fatty portion of all dry, inflammatory, and non-inflammatory seborrhœæ? 4. Whence comes the fat of the seborrhœa oleosa, or, more correctly, hyperidrosis oleosa? 5. Is, then, such a thing possible as a seborrhœa sicca (pityriasis) without some inflammatory symptoms? 6. Is there simple functional hypersecretion of the sebaceous glands? or, 7, simple functional hypersecretion of the convoluted glands, and does the latter show any symptoms of seborrhœa? To these are added the three following important questions:—8. Can inflammatory symptoms of the convoluted glands be histologically proved in the case of dry seborrhœa? 9. If so, by what are such inflammatory symptoms caused? 10. Is it possible to trace to this same cause the superficial inflammation with subsequent parakeratosis?

JOHN ELLIOTT.

SYPHILOGRAPHY.

RECENT PAPERS.

2255. Neumann, J.—A Study of Hereditary Syphilis. (*Wiener klin. Wochensch*, Nos. 4—9, 1889)

2256. Myrtle, A. S.—Two Cases of Gonorrhœal Arthritis. (*Brit. Med. Jour.*, August 3, 1889.)

2257. Whitehead, H. R.—Notes on an Outbreak of Syphilis following Tattooing. (*Brit. Med. Jour.*, Sept. 14, 1889.)

2258. Diday.—The Dose necessary for the Abortive Treatment of Gonorrhœa. (*Annales de Derm. et de Syph.*, No. 1, 1889.)

2259. Jullien.—On a Lesion of the Cartilages of the Ear in Secondary Syphilis. (*Ibid.*, No. 2, 1889.)

2260. Molènes, P. de.—A Case of Gonorrhœal Erythema. (*Ibid.*, No. 2, 1889)

2261. Trousseau, A.—A Case of Interstitial Keratitis in Acquired Syphilis. (*Ibid.*, No. 2, 1889.)

2262. Tenneson.—Hydroa and Arthropathy in Gonorrhœa. (*Ibid.*, No. 2, 1889.)

2263. Barthélemy.—A Case of Syphilis transmitted to the Offspring after Fourteen Years. (*Ibid.*, No. 3, 1889.)

2264. Besnier.—Syphilitic Roseola persisting Two Years after the Initial Sclerosis. (*Ibid.*, No. 3, 1889.)

2265. Fournier.—Late Syphilitic Roseola. (*Ibid.*, No. 3. 1889.)

2266. Fournier, Professor.—On the Difficulties of Diagnosing the Syphilitic Chancre. (*Rev. Gén. de Clin. et de Thérap.*, Oct. 3, 1889.)

Art. 2255. *Neumann on Hereditary Syphilis.*—From an elaborate study of this subject, based on 261 cases, Professor J. Neumann, of Vienna, has arrived at the following conclusions:—1. A syphilitic mother is capable in every stage of the disease of transmitting it to her offspring, no matter whether she has been infected before or after conception. 2. Syphilis acquired by the mother after conception sometimes passes to the fœtus, but this very rarely happens when the mother's infection has taken place in the last months of pregnancy. 3. If the mother be infected after conception, the father having been syphilitic at the time of procreation, the effect on the offspring is much more severe, the child either dying *in utero* or being born with syphilis. 4. In syphilis acquired by a mother after conception, the state of health of the father at the time of procreation being unknown, the situation is the same as when the syphilis is obviously post-conceptional. 5. When infection and conception occur at the same time, half the children die. At the same time it must be remarked that a large number of children remain free from syphilis, although that disease may have been in activity in both parents at the time of conception. 6. When infection precedes conception, the period at which the latter takes place is the first point for consideration. The longer the interval between infection and conception the more favourable is the prognosis as regards the offspring. An energetic mercurial course has always a good effect; for example, among the author's cases, even when infection and conception had occurred simultaneously, there were healthy children when the parents had undergone treatment by mercurial inunction. 7. The chances of escape for the offspring are greatest when the mother has acquired syphilis during pregnancy, especially during the later months, and the father was healthy at the time of procreation. On the other hand, the chances of escape are least when conception and infection have occurred at the same time, or when the father suffers from recent syphilis at the time of procreation. Of the fatal cases observed by the author, most come under the headings of 'Conception and Infection simultaneous,' and 'Post-conceptional from a syphilitic father.' 8. The dangers of paternal syphilis are well shown by certain cases in which the father was syphilitic at the time of procreation, the mother only having become infected after conception, and in which a macerated fœtus was born prematurely. This is contrary to what was taught by Boeck and Oewre, who were of opinion that the child of a syphilitic father is healthy. 9. The observations to the effect that mothers infected during the later months of pregnancy usually bear healthy children seem to show that the practice of bringing on premature labour recommended by Oewre and other authors is not only unnecessary but detrimental. 10. That tertiary syphilis does not cause sterility in a woman is a fact that need only be mentioned. 11. Experience has shown that a protracted course of mercurial treatment, as recommended by Hutchinson, has a favourable effect on the health of the offspring. 12. The author cannot, however, agree with Hutchinson that it is unimportant as regards the intensity of the disease in the child whether one or both of the parents were syphilitic at the time of conception. Out of forty-one of the author's cases, in which conception and infection took place at the same time, only fourteen children were healthy.

2256. *Myrtle on Two Cases of Gonorrhœal Arthritis.*—*Case* 1.—A sailor, aged 22, with gonorrhœal arthritis and effusion in both knee-joints of some months' duration, was treated at Harrogate with two 12-oz. tumblers of the old sulphur-water an hour before breakfast, and 8 oz. of mild sulphur-water at noon. The joints were at first wrapped in wool and bandaged; afterwards passive motion, massage, rubbing, and hot sulphur douches, were employed. After six months' treatment the left knee was well, and the right one still slightly enlarged. A year later he was as strong and active as if he had never had arthritis. *Case* 2.—A man, aged 32, with gleet of three months' duration, had effusion in the right knee only. In both cases there was extreme wasting of the muscles of both lower limbs. Under the same treatment as in Case 1 the patient returned to business in five weeks quite well. Dr. Myrtle remarks that, except in gonorrhœal rheumatism, he has never seen such loss of nutrition in the muscles above and below the affected joint. 'The wasting is both sudden and persistent, and, to my mind, points clearly to the view expressed by various authorities that here we have certain centres of the cord and brain somehow or other partially paralysed by the reflex sympathy existing between them and the inflamed urethra; the wasting in the muscles of the limb not affected with the special joint mischief is decidedly in favour of that opinion.'

2257. *Whitehead on an Outbreak of Syphilis following Tattooing.*—Surgeon Whitehead, M.S., reports five cases of this kind which occurred at Landour (India) in 1887. The tattooer, a private in the Lincolnshire Regiment, had tattooed, as far as could be ascertained, about a dozen men, of whom five developed syphilis. The rest were inspected and found to be healthy. The tattooer had been admitted into hospital in November 1886, with a hard sore of the penis, followed by roseola and sore throat. In July 1887 he had ulceration of the throat and tongue, and mucous patches on the tongue and gums, &c. In all the cases in which syphilis followed the tattooing he had used his saliva to clean the surface. The primary sore in all the cases was single, and appeared invariably at the first point pricked; it was never rupial in character. Marked induration of the brachial and axillary glands was present in every case. Coppery discoloration and induration at the seat of the primary sores continued for a long time. In all the cases affections of the skin and throat followed. None of the men had suffered from syphilis previously. All were treated with mercury and iodide of potassium, and in each case great debility followed; but most of the men had suffered from ague.

2258. *Diday on the Abortive Treatment of Gonorrhœa.*—M. Diday relates the following case treated by the patient himself. A man, aged 29, who had already had three attacks of gonorrhœa, noticed a discharge on Nov. 6, three days after exposure. Nothing was done until the afternoon of the 7th, by which time the discharge had become rather profuse and purulent. The patient then injected, on his own responsibility, a solution of nitrate of silver, 48 grains to the ounce. The pain caused by this was very acute, but the fluid was said by the patient to have been retained half a minute, but M. Diday thinks the time was probably only seven or eight seconds. He had also held over the meatus for two minutes a thimble filled with the same solution. In two hours afterwards there was a profuse discharge. With this story the patient came to M. Diday on the eighth (twenty-four hours after the injection), when the lips of the meatus and the prepuce were inflamed and œdematous. The urethra was hard and tender to the touch for the extent of 6 centimètres, and there was a copious bloody serous discharge. On the 10th there was no discharge, and all traces of inflammation had disappeared. The patient was seen again on the 20th, and he remained quite well. This case is considered by M. Diday to be one of aborted gonorrhœa, although the discharge had become purulent before the remedy was applied. He also contrasts the favourable results of this very heroic treatment with the by no means always successful results obtained by himself in the earliest stage with the very much weaker solution (5 grains to the ounce) which he is accustomed to employ in his practice.

2259. *Jullien on Lesion of the Cartilages of the Ear in Secondary Syphilis.*—Dr. L. Jullien reports the case of a man in whom, during the fourth month of his syphilis, there developed a painless swelling of the upper part of the left pinna. The swelling occupied part of the fossa of the helix, the antihelix, and the fossa of the antihelix, being limited below by the concha. The overlying skin was of a dull red colour. In consistence the swelling was soft, almost fluctuating, and palpation caused no pain. The posterior surface of the ear was normal. The patient had other signs of syphilis at the same time, and was treated with mercury and iodide of potassium. Four months later, only an irregular cartilaginous cicatrix remained. The patient suffered severely from various other syphilitic affections, and three years afterwards there was still deformity of the cartilaginous portion of the ear at the site of the previous swelling, and the skin over it, which was redder than on the healthy side, was thin and adherent. Dr. Jullien has been unable to find any record of a similar case.

2260. *Molènes on a Case of Gonorrhœal Erythema.*—M. de Molènes is of opinion that eruptions due to copaiba or cubebs are rare. He does not deny absolutely that they may occur; but when a more or less extensive eruption is seen in a patient with gonorrhœa, the cause, according to the author of this paper, is most frequently the gonococcus of Neisser, and not copaiba or cubebs. In support of this contention M. de Molènes relates one case—that of a man, aged 30, who had suffered from gonorrhœa, complicated with epididymitis, for about a month. He then suddenly developed a rash, which the author saw on the day after its appearance, and describes as having all the characteristics usually ascribed to eruptions produced by copaiba or cubebs. The patient had not been taking either of those drugs, nor in fact any internal remedies except diluents. Local applications of belladonna and opium in poultices and *per rectum* had been given for epididymitis and cystitis, and these affections were subsiding when, a few days after beginning the use of an injection (1 in 5,000) of corrosive sublimate, the rash appeared. It lasted seven days, and then disappeared in spite of the administration of copaiba and cubebs, which were then given to test their influence on the eruption.

2261. *Trousseau on a Case of Interstitial Keratitis in Acquired Syphilis.*—The patient in this case was a woman, aged 25, admitted into the Saint Louis Hospital (under the care of M. Fournier) on June 2, 1888. There was neither sign nor history of rheumatism, scrofula, gout, cachexia, nor inherited syphilis. Four years previously the woman became pregnant for the first time, and contracted syphilis during her pregnancy. She was confined in Lourcine Hospital, and was treated there for ten months with green iodide of mercury and sublimate baths. The child lived ten months. A month ago the woman had an outbreak of scaly tubercular spots on both shoulders, and coppery papules between the eyebrows; and a fortnight before that she had noticed that her eyes were bloodshot, and in two or three days the sight became dim. When examined by M. Trousseau on June 6 there was sclero-conjunctival congestion; the cornea was greyish, and infiltrated so that by oblique illumination the iris could only just be seen, and that only in certain places. The pupil appeared to act to light. Both eyes were similarly affected, and there was but little photophobia. The patient could with difficulty count fingers at two mètres' distance. There was also a diffused syphiloma of the right upper lid. Compresses of hot boric lotion and the application of atropine were ordered locally, as well as mercurial inunction and iodide of potassium internally. On June 13 the right cornea was clearing. Some synechiæ could be seen at the lower part of the pupil, and the vitreous was hazy. On June 20 both corneæ had cleared considerably, and vision was gradually improving. The vitreous and fundus of the eye were healthy. The syphilide had disappeared. On July 2 the patient was cured, with the exception that some very small infiltrations of both corneæ remained: these afterwards disappeared.

2262. *Tenneson on a Case of Hydroa and Arthropathy in Gonorrhœa.*—At a weekly meeting of the medical staff of the St. Louis Hospital, M. Tenneson showed a man suffering from gonorrhœa and arthritis who had also on the backs of the hands and wrists a typical eruption of hydroa (herpes iris of Bateman). The gonorrhœa had not been treated. The author called attention to the coincidence of the gonorrhœa and the skin affection, but expressed no opinion as to their relationship. M. Besnier thought that the two were intimately related, and called the skin eruption 'gonorrhœal erythema.' By that term he stated that did not mean that the eruption was directly 'gonococcique,' but that it was 'angionerveux,' that is to say, caused by the influence of gonorrhœa on the vaso-motor nervous system.

2263. *Barthélemy and Others on a Case of Syphilis Transmitted to the Offspring after Fourteen Years.*—At a meeting of the staff of the Saint Louis Hospital, M. Barthélemy showed a child, 4 months old, covered with a papular and erosive syphilide. The general health was good, and the child had been born at term. The first symptoms had appeared at about the age of three months, and there had been no primary sore. The history was that the parents had been married 18 years, and that both had suffered from syphilis 14 years ago. The father had been treated at the Midi, and the mother at Lourcine, where, however, she remained only two days, and had had no further treatment since. The father had taken sublimate pills irregularly for about a year under the direction of M. Langlebert. The course of the disease in both had been benign. For three years they had no children, then a girl was born at term, and died at the age of 7 years of meningitis. A second child died at the age of 7 months with 'boutons.' A third was said to have died, aged 9 months, of infantile cholera. The fourth was 25 days old when it died of broncho-pneumonia. The fifth child had, three days after birth, an affection of the left eye, which seemed to the author from its present 'porcelain' appearance to have been interstitial keratitis. At the present time he was three years old, small and thin, but lively and intelligent, and with no obvious marks of syphilis on his body. Still M. Barthélemy thought he was syphilitic, not solely on account of the appearance of the eye, nor the 'infantilism,' but also because he had not acquired syphilis, although the author had seen him embracing his brother and bringing his lips closely in contact with the discharging syphilides on his brother's face. The sixth child was the subject of the present communication. He was, at the time he was exhibited, four and a half months old, and had been suffering for about six weeks. The fact of syphilis was indubitable. It was remarked that at the time of conception neither parent had any apparent signs of syphilis. M. Barthélemy said that the case showed to how late a period, in exceptional instances, syphilis may remain transmissible to the offspring, when the parents have been insufficiently treated. M. Fournier thought the period during which syphilis might pass to the offspring was longer than was usually supposed. He had notes of cases in which syphilis was inherited, seven, eight, ten, and even up to fifteen years after the infection of the parents. One case, which he believed to be unique, was that of a woman, who, at the end of twenty years bore an infant who was attacked by interstitial keratitis and exostosis; both lesions rapidly disappeared under treatment by iodide of potassium. In the vast majority of cases, no doubt, a syphilitic man who married even at a not very advanced stage of his disease, procreated healthy children, but some men were dangerous, from this point of view, for a very long time. For example, a man who was under the care of M. Ricord, married at the end of seven years after infection, having obtained permission to do so. The wife became pregnant at once, and during the third month of her pregnancy showed signs of syphilis, whilst her child was syphilitic at birth, and afterwards suffered from interstitial keratitis and periostitis. M. Besnier, after remarking on the fact that both parents in the case under examination were syphilitic, was strongly of opinion that such cases of transmission were very rare exceptions, and that all such should be scrutinised with the greatest care, seeing that in the immense majority of cases a syphilitic man who procreates during the tertiary period becomes the father of children who are not syphilitic, and who are quite capable of being syphilised. He could not admit, in reference to the case quoted by M. Fournier, that a man whose syphilis dated back eight years could infect a woman who in her turn should bear a child syphilitic at its birth, and syphilitic too in the same way as if the parents had only reached the secondary stage of the disease. In all such cases a searching inquiry ought to be made, and it ought to be shown that neither mother nor child had contracted syphilis independently of the father. There were unfortunately a multitude of ways in which syphilis might be innocently caught. M. Hallopeau thought it difficult to believe that after fifteen years a syphilitic person could transmit syphilis in a form that showed itself by a general eruption like that seen in the secondary stage. M. Lailler said the date of infection was not the sole thing to be considered in these cases. It was necessary also to take into account the date when the parents last showed signs of syphilis. Those in whom such signs were prolonged could still communicate the disease because they were still in its power.

2264. *Besnier on Syphilitic Roseola persisting Two Years after the Initial Sclerosis.*—M. Besnier showed a man, aged 25, who in addition to a pustular syphilide on various parts of his body, had also diffused patches of roseola. The primary sore dated from December 1886; roseola appeared in February 1887, while the patient was in the Midi Hospital, and had lasted ever since.

2265. *Fournier on Late Syphilitic Roseola.*—M. Fournier showed a young woman who had had syphilis five years before, and who had now, besides syphilitic papules of the lower limbs, some rounded or oval brownish pigmented patches on the trunk. The patches were slightly scurfy, and were not coloured in the middle. No form of parasite had been discovered. M. Fournier said that he had from time to time, during the last twenty years, seen cases of a similar kind, and he had at first been inclined to consider them not due to syphilis, but as they occurred only in syphilitic subjects he had come to the conclusion that the affection was truly specific, and a kind of late or tertiary *roseola circinata*. It was remarkable, however, that treatment had little effect on the eruption. This patient, for example, had undergone specific treatment for several months without being cured.

Arthur Cooper.

2266. *Fournier on the Difficulties of Diagnosing the Syphilitic Chancre.*—In a recent clinical lecture M. Fournier called attention to three patients with lesions which simulated syphilitic chancre very closely, although they were in two of them something quite different. The first had several erosions on the prepuce, one of which had a distinctly indurated base, and offering a striking resemblance to the typical hard chancre, the more so as it was accompanied by indolent enlargement of the inguinal glands on both sides. The lesions in the second patient were very similar. They were situated on the prepuce, and presented the same smooth aspect, the same 'parchment' base, and the same enlargement of the glands. He pointed out that in cases of this kind no diagnosis could be arrived at merely on the objective character of the lesions. It is necessary to take into consideration—(1) neighbouring alterations in tissue, should they exist. When, for instance, around suspicious ulcerations one sees herpetic vesicles, ulcerated or not, the presumption is in favour of all the lesions being herpetic. This cannot, however, amount to more than a 'presumption,' because a syphilitic chancre sometimes causes a herpetic eruption in its immediate neighbourhood. (2) The character of the glandular enlargement:—When this is 'cold' and indolent, it possesses no diagnostic value; but when painful and inflammatory, it cannot be directly dependent on a syphilitic lesion. (3) The history given by the patient:—The duration of the period of incubation is of very great importance. When the lesion has made its appearance within four or five days of coitus, then it may generally be affirmed that they are not syphilitic. Unfortunately patients' statements are not always to be relied upon, and this point cannot therefore be made the basis of a confident opinion. It often happens, therefore, that one is obliged to wait the course of events before formulating a definite diagnosis, keeping a sharp look out for the first indications of secondary symptoms. The third patient was suffering from scabies, and had rubbed himself vigorously with sulphur ointment and soft soap. The penis, in particular, had been the object of special attention. Three weeks after commencing this treatment sundry ulcers made their appearance on the prepuce, the nature of which it was utterly impossible to diagnose. There were five herpetiform erosions on the prepuce, and four yellowish indurated patches of ulceration on the glans. In the groin the glands were enlarged and painless. In this particular case the multiplicity of the lesions could not be made use of as an argument against their syphilitic nature, for the lesions caused by coincident scabies may furnish several sites for the inoculation of the virus. In one instance, indeed, a patient at the Hôpital St. Louis, suffering from itch, had as many as fifteen indurated chancres on the penis. In this third patient, moreover, the last sexual intercourse dated from just prior to the commencement of the sulphur treatment—*i.e.* three weeks prior to the appearance of the lesions, just about the incubation period of syphilis. In such a case there was nothing for it but to wait until the shadows were dissipated. This is what happened in M. Fournier's case. A week later, the scabies having been cured, three indurated chancres remained, as to the specific nature of which no uncertainty was felt.

ALFRED S. GUBB.

DR. PHILIP CRAMPTON SMYLY, of Dublin, is the new President of the British Laryngological and Rhinological Association.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2267. POUCHET, M.—On the Localisation of Arsenic in the Bones. (*Rev. Scientifique*, Oct. 26, 1889.)

2268. KLOMAN, W. C., M.D.—A Case of Poisoning by Illuminating Gas. (*New York Med. Jour.*, Oct. 26, 1889.)

2269. PREVOST AND BINET.—On Experimental Researches on Lead Poisoning. (*Rev. Méd. de la Suisse Romande*, Oct. 20, 1889.)

ART. 2267. *Pouchet on the Localisation of Arsenic in the Bones.*—In reference to the question of the diffusion of poisons after death, and the difficulty of distinguishing between poisons given during life and those added after death for preservative purposes, M. G. Pouchet insists upon the fact that whenever arsenic is administered during life—whether by hypodermic, or intravenous injection, or by the mouth—it tends to accumulate in the spongy bones, especially in those of the cranium and vertebræ, where its presence may be detected long after all trace has disappeared from the viscera, and even from the liver. This localisation in the spongy osseous tissue is particularly well marked when arsenic has been given in small doses spread over a long period of time; when, on the other hand, it is given in doses capable of causing death within a few hours, it is to be sought for preferably in bones largely built up of compact tissue. The arsenic thus accumulated is very slowly eliminated, and may still be found eight or ten weeks after the administration of the poison has been discontinued, whereas the viscera often give a negative result as early as the third week. Investigations on animals have afforded well-marked evidence of elimination of arsenic by the skin and hair. The researches of Papillon, Rabuteau, and, later, of Dragendorff, had already demonstrated the fact of the substitution of arsenic for the phosphates in bone; but to M. Pouchet belongs the credit of having first demonstrated the slowness with which it is eliminated from bones, a point of very great importance in medico-legal practice. This discovery, however, would not presumably afford a solution of the problem of deciding whether or not the poison was administered during life, should arsenic have been injected *post mortem* into the veins.

ALFRED S. GUBB.

2268. *Kloman on a Case of Poisoning by Illuminating Gas.*—Water gas is much more poisonous than gas made from coal, a well-known fact which has received abundant confirmation of recent years. Dr. Kloman's patient was a coloured girl, aged 17, who had gone to bed one evening about 10 P.M., and was found in her room insensible at 5 A.M. the next morning. The doctor saw her at 6.30 A.M. She had then been moved into another room, with the window open; her limbs were cold, no pulse could be felt at the wrist, and there was no sign of life except respiration, which was shallow and stertorous. The eyes were partly open, staring and fixed, the conjunctivæ were intensely congested, the pupils moderately dilated and insensible to light; the conjunctivæ were anæsthetic. A tablet containing one-fiftieth of a grain of nitro-glycerine was dissolved and injected into her arm, and her body was covered with blankets; in two minutes some pulsation could be felt at the wrist, and in five minutes her pulse was good and strong, her respirations became deeper, and her limbs began to get warm. In a quarter of an hour she vomited, and then recovered consciousness. An ether draught was prescribed, and in about three hours she had completely recovered save for some headache, which lasted two or three days.

2269. *Prevost and Binet on Lead Poisoning.*—The authors of this paper report a series of experiments made on animals with the view of determining how far lead poisoning can be produced experimentally, and what the exact nature of the changes so produced is. In their first series they injected solid lead under the skin or into the peritoneum, the practical result being that no lead poisoning followed. Subcutaneous injections of lead in solution did not give rise to any definite phenomena of lead poisoning, though the kidneys were generally found to have been affected on *post mortem* examination. The intravenous injection of an albuminate of lead was not much more successful in the way of producing symptoms of poisoning, though the animals died more or less soon from wasting, convulsions, or other such cause. Injection of white lead or acetate of lead into the stomach gave rise to rapid wasting and a certain amount of cachexia, and, on autopsy, certain lesions of the kidneys were generally found. Slow poisoning by admixture of lead with the food was next induced, the most constant symptom being a progressive loss of weight, so that at the time of death the animal weighed only one-third of its original weight. The appetite was generally well maintained; the stools were hard and blackened; it was difficult to make out whether the animals had colic; the urine was sometimes albuminous, but never to a high degree, and no blood was found. The only phenomena that could with certainty be referred to the poisoning were paralyses, mostly of the hinder extremities; hoarseness and almost complete aphonia were present in some cases, and in nearly all there was some degree of anæmia. Pathologically, a peripheral neuritis, especially involving the nerves of the hinder limbs, in all cases that had lasted more than a month, and especially in those cases where there had been paretic symptoms during life. If the treatment was suspended, the paralytic phenomena generally disappeared, and then the changes in the nerves were not found after death. No alterations in the muscles were found. Lesions of the kidney were tolerably constant, and showed themselves early; yellowish, rounded, glistening masses, either discrete or aggregated into patches, were found in the cortex; these masses were abundant in direct proportion to the chronicity of the poisoning; their actual seat was in the inter-tubular tissue. The changes in the other viscera were not of any special significance.

DISEASES OF CHILDREN.

RECENT PAPERS.

2270. Fervers.—On the Treatment of Whooping-cough by Quinine Injections. (*Jahrbuch für Kinderheilkunde*, xxviii., Heft 2.)

2271. Todd.—On a Case of Stone in an Infant Sixteen Months Old. (*Australasian Medical Gazette*, No. 95.)

2272. Goldthwait.—On a Case of Hip Disease, in which the Night Cries were stopped by Flexing the Leg. (*Boston Med. and Surg. Jour.*, Sept. 19, 1889.)

Art. 2270. *Fervers on the Treatment of Whooping-cough by Quinine Injections.*—The author begins by attributing the popular impression that this disease is unamenable to treatment to the fact that the cases are seldom brought to the notice of the physician until an advanced stage has been reached. Quinine has already been largely given for this complaint, and often with great success; but children commonly vomit the large doses which are alone of service, and they refuse to swallow the capsules or tablets whole. It has also been given as a clyster, but by this method there is always a large and varying portion of the drug unabsorbed. The salt employed by Dr. Fervers was the carbamide, which, according to Binz, contains 62·5 per cent. of dry hydrate of quinine. The first case was that of Julie B., five weeks old. The cough had already lasted ten days, and at the commencement there were eleven daily paroxysms. After five injections of 6 centigrammes of dry hydrate each, the number of paroxysms fell to four, and by the eleventh day, after three more injections, they ceased. The injections, which were made in the gluteal region, were followed by no unpleasant results, either local or constitutional. Barbara O. was 8 years old, and had had the cough, numbering twenty-one paroxysms daily, for a fortnight. An injection of 31 centigrammes was administered once or twice a day, and for the first six days the number of paroxysms fluctuated between sixteen and nineteen. During the next eight days the number rapidly diminished, almost without interruption, and on the fourteenth day the paroxysms ceased. A slight reddish induration followed one injection, but it soon disappeared. Altogether eleven cases are described, and the results were equally striking. In one case, however, a gangrenous patch, the size of a florin, appeared on the site of an injection puncture, but it soon healed. In another a relapse occurred, but soon yielded to the same treatment. In another, again, pneumonia set in, and the child, eight months old, died. In his concluding remarks the author recommends that the solution be neither too bulky nor too concentrated; the mean strength employed by him was 50 per cent. The great objection to this mode of administration is the resistance offered by both child and parents, and in a large number of cases it was abandoned at an early stage owing to this opposition. The method should therefore be reserved either for those who can take quinine in no other way, or for others in whom the severity of the affection is so great as to demand the most rapid means of amelioration within reach. The carbamide is the best salt to use, but even that might be improved upon could a salt be found readily soluble and not liable to be precipitated by alkaline tissues.

2271. *Todd on a Case of Stone in an Infant Sixteen Months Old.*—The child was stated, when first seen, to have passed no water for 24 hours, with the exception of a few drops now and then as the result of violent straining and struggling. On examination, the bladder was found distended to the umbilicus. A No. 4 silver catheter was passed and three pints of water were drawn off. As the instrument entered the bladder it struck a stone. Two days later lateral lithotomy was about to be performed, but on introducing the sound the stone was found firmly impacted in the urethra half an inch from the orifice, whence it was removed with a director after dilatation. The calculus was of uric acid, of an ovoid form, and about the size of a pea.

2272. *Goldthwait on a Case of Hip Disease, in which the Night Cries were stopped by Flexing the Leg.*—The patient, a healthy-looking girl, 6 years old, had had hip disease nine months, and had been under treatment six months. She was admitted into hospital chiefly for the night cries which latterly had recurred fifteen or twenty times during the night. There were no other acute symptoms; no pain, no apparent deformity, and the motion of the joint was by no means entirely restricted. She was first treated by extension with a four-pound weight, but without result. Then the weight was doubled, and she was ordered 10 grains of salicylate of soda four times a day; but the night cries continued as before, although the drug had given great relief in many previous cases. On June 11, by way of experiment, the salicylate was omitted, and the leg was flexed at an angle of about 30° with the bed, and the weight raised so as to pull in the same direction. That night she cried out once, and upon the six following nights she slept soundly all night. On the night of June 18 the leg was put down flat upon the bed, and she cried out once. This was repeated the following night with the same result. The leg was again raised, and there were no more night cries. During the day she was up and about the ward. RALPH W. LEFTWITCH, M.D.

INSTRUCTION in the elements of medicine and surgery is to be given in Italian military schools. The idea is that officers should be able to render 'first aid' in case of sudden illness or accident.

THE new Medical College at Newcastle, which has been erected at a cost of £33,000, was opened by the Mayor of that city on Wednesday, October 2. The college is admirably arranged for medical students, of whom there are now upwards of two hundred on the books. Two medical men of the city, Dr. Heath and Dr. Gibb, have each contributed 1,000 guineas to the building fund.

La Clinique gives the following instructions for the removal of gunpowder stains from the hands of sportsmen. The pigmented skin should be washed with distilled water containing half its own weight of biniodide of ammonium. The colour then changes to red, and the red stains disappear on the application of a little dilute hydrochloric acid.

ONE of the New York papers having offered a prize to the metropolitan mother who had successfully reared the largest number of boys and girls, it was carried off by the mother of fifteen children, all living, the youngest being five years of age. The father of this interesting family was one of fifteen children, some of whom have died, but the mother is one of fifteen, all of whom are living, some of them at advanced ages.

MESSRS. BURROUGHS, WELLCOME, & CO. have now in the press a new edition of the *Vest Pocket A.B.C. Pocket Library and Memorandum Book.* It contains 106 pages, apportioned for each day in the year, excepting Sundays, and pages in alphabetical order for addresses and memoranda. This small book will undoubtedly prove useful to the medical profession for noting different engagements, addresses, and memoranda. A condensed price list for convenient reference has also been included in the publication. They will be happy to supply, post free, a copy of this book to any medical man who may desire it upon his sending to them his name and address, and also a small morocco wallet fitted with pockets for postage-stamps, cards, &c., with spaces for fitting in small slips of paper convenient for noting special memoranda, at the cost of the same to the firm when purchasing in large quantities. The book and cover complete may be conveniently carried in the waistcoat pocket.

REVIEWS.

ARTICLE 2273.

Transactions of the American Surgical Association. Vol. VII. Edited by F. EWING MEARS, M.D., Recorder of the Association. Philadelphia: P. Blakiston, Son, & Co. 1889.

IN the volume before us we have a record of the work done at its last annual meeting in May by an active and influential association of American surgeons. It contains, besides the opening address of Dr. David W. Cheevor, fourteen papers, most of these on surgical subjects of much interest at the present day, and the practical value of which in almost every instance is much enhanced by a full report of the subsequent discussion. Of these fourteen papers more than half are devoted to some subject or other of abdominal surgery—a department to which American practitioners have of late devoted much attention, and the recent progress in which they have certainly much assisted by bold operative measures, based on careful and laborious scientific inquiry. One of the most interesting of these contributions on abdominal subjects is that by Dr. J. M. Barton, of Philadelphia, on 'Digital Divulsion of the Pylorus for Cicatricial Stenosis.' In this paper a successful instance of such treatment under the author's care is reported, and a table given of twenty-four previously recorded cases, which shows a high rate of mortality, death having been caused by the operation in ten cases. With the object in view of reducing this high death-rate, Dr. Barton devotes the main part of his paper to questions of diagnosis and to means of improving the methods of the operation by which its risk, especially bleeding, may be considerably lessened. Another paper, of much interest, on abdominal surgery is one by Dr. McGraw, of Detroit, on 'Gunshot Wounds of the Intestines.' This surgeon, basing his views on the facts of the grave risk attending a prolonged laparotomy and free exposure of the intestinal canal, and of the tendency for the seat of injury and subsequent effusion to be cut off from the rest of the abdominal cavity by adhesive inflammation, is in favour of limiting the examination of the wounded viscera to such of them as may lie in the course of the wall. A careful examination for small perforations of the intestine, through which there is apparently no flow of the intestinal contents, is discountenanced, as free exposure of the abdominal viscera, or, as it is called, evisceration, is believed to be 'fully as dangerous as any unrepaired gunshot wound of an intestine, which cannot be made to discharge its contents by manipulation and pressure.' Dr. McGraw holds that in penetrating gunshot wound of the abdomen the missile always takes a direct course from the point of entrance to that of exit or arrest, but this view was much questioned in the course of the discussion by Dr. Mancrede and others. This volume of *Transactions* contains two papers on 'Hernia'—one by Dr. Martin, which is a review of the various methods that have been devised for its radical cure; the other on the 'Surgical Treatment of Gangrenous Hernia,' by Dr. Maurice Richardson, who, though in favour of excision and enterorrhaphy, thinks that this operation is pre-eminently a hospital one, and should only be done when all the conditions are favourable. In a contribution on 'Free Division of the Capsule of the Kidney for the Relief of Nephralgia,' by Dr.

Tiffany, an instructive case is recorded which suggests an explanation of the relief that has frequently followed otherwise unsuccessful operations for supposed renal calculus. Dr. Homans contributes a short paper on 'Nephrectomy,' and this interesting and varied series of comments on subjects of abdominal surgery is rendered almost complete by some remarks by Dr. Lewis A. Stemson on the 'Technique of Abdominal Surgery,' and by a case of lumbar cholecystotomy reported by the recorder of the association. In the discussion on a paper by Dr. J. Collins Warren, who, pointing out the importance of early diagnosis of malignant disease, recommends the use of a small instrument for removing portions of new growth from a living body, there is, as one would anticipate from a body of experienced and practical surgeons, an almost unanimous opinion as to the risks of such experiments, and the advantage in actual practice of clinical study over microscopical examination.

Article 2274.

A Text-Book of General Therapeutics. By W. Hale White, M.D., F.R.C.P., Senior Assistant Physician to and Lecturer on Materia Medica at Guy's Hospital. London: Macmillan & Co. 1889.

This volume comprises, in an extended form, the lectures, delivered by the author during the summer session, dealing with modes of treatment which do not fall under the heading of drugs, and 'published by request.' These methods include climatology and the treatment of disease by climate, together with the effects of artificial variations in atmospheric pressure; diet and dietetic treatment; balneology and hydrotherapeutics; massage; electro-therapeutics; hypnotism; metallo-therapy and suspension. To deal thoroughly with these far-reaching subjects would require many such volumes as the one before us, and the author has had to confine himself to brief outlines in each instance. We doubt whether any one is likely to derive much practical information from the scant details given on the climatic treatment of disease. They are too vague. The same remark applies to the treatment by compressed air, as to the beneficial effects of which the author is dubious. He goes somewhat more thoroughly into Oertel's method of treatment in chronic cardiac disease, but without taking any very decided view as to its efficacy in this particular class of cases, his remarks being for the most part restricted to recapitulating the criticisms of Bamberger and others on the physiological assumptions underlying Oertel's method. The most remarkable thing in the chapter on diet is the strong recommendation of Benger's Liquor Pancreaticus, but little or nothing is said of the cases in which this and similar digestive ferments should be used. Detailed information on such a subject would possess more practical value to the medical man than suggestions bearing on the effect of 'nitrogenous metabolism on the thermogenetic function of the muscle.' The milk cure, the grape cure, and others are disposed of in about twenty lines apiece, a fact which would seem to warrant the conclusion that they are either useless or else that they have been very inadequately treated. The same uncertainty characterises the author's observations on the cold-water treatment of fever. He sums them up in the remark that 'it is quite possible observation may ultimately show that cold baths do not give such good results as some of the recently introduced antipyretic drugs,' of which he instances antifebrin, which he tells us is very largely employed. In the chapter on electricity some of the author's remarks are open to question. For instance, he tells us that all cells with only one fluid are subject to the disadvantage that chemical action goes on when the battery is not working. So far as we are aware, however, this does not apply to the Leclanché cell and its modifications. The author, too, appears to have fallen into the common error of using the 'interrupted' and the 'faradic' current as synonymous terms, which they are not, by any means. He uses, too, such terms as kathode, anode, kalectrotonus, &c., without explaining their meaning, with the result of a certain obscurity to those who are likely to be seeking for information. We cannot criticise further in detail, but on the whole the impression left by the perusal of the work is rather disappointing. It is easy and even agreeable reading, but is too scientifically vague to be of much service to the student or busy practitioner.

Article 2275.

Artificial Feeding and Food Disorders of Infants. By W. B. Cheadle, M.D. London: Smith, Elder, & Co. 1889.

This little work, which embodies a series of lectures delivered at the two hospitals with which the author is connected—St. Mary's and Ormond Street—treats of a well-worn subject. Dr. Cheadle's extensive experience, however, enables him not only to determine the clinical value of the theoretical conclusions of others, but also to make some absolute additions to the general knowledge of the subject. The following are essential conditions to be observed in the diet of infants:—1. The food must contain the different elements in the proportions which obtain in human milk. 2. It must possess the antiscorbutic element. 3. The total quantity in 24 hours must be such as to represent the nutritive value of 1 to 3 pints of human milk according to age. 4. It must not be purely vegetable, but must contain a large proportion of animal matter. 5. It must be in a form suited to the physiological condition of the digestive function in infancy. 6. It must be fresh and sound, free from all taint of sourness or decomposition. These conditions may be obtained in many different ways. A near approach is artificial human milk which is made from cows' milk by the removal of one half of its casein; and a still nearer approach is made by combining bread jelly, raw meat juice, cream, sugar, and water. The bread jelly is made by soaking a thick slice of stale bread in cold water for 6 or 8 hours; the water is then squeezed out of it and thrown away and the pulp is placed in fresh water and gently boiled for an hour and a half. The result is a jelly-like mass, a tablespoonful of which mixed with 8 ounces of warm boiled water makes a food of the consistence of cream. An infant will thrive on this food combined as above when quite unable to digest cows' milk, however dilute. But both this and the artificial human milk require to be fresh made. Peptonised milk is of a disagreeably bitter flavour, and a prolonged use of it may lead to atrophy of the secreting surface of the stomach. Malted foods are valuable when not too laxative, but are utterly inadequate when, according to the directions given with some kinds, they are mixed with water only. Purely farinaceous foods are self-condemned. Of animal foods, beef-tea, however carefully prepared, is all but useless, as it contains only about 1 per cent. of proteid. Far preferable, as containing 5 per cent., is raw meat juice. To make this, one part of water is added to four parts of finely minced prime rump-steak and allowed to stand with occasional stirring for half an hour. The juice should then be forcibly pressed through muslin by twisting it. Meat peptones are remarkably rich in proteids, but their flavour is objectionable, so that children will not take them readily, and their continued use is undesirable for the same reasons as peptonised milk.

The remainder of the book deals with the various infantile disorders which owe their origin to defective feeding. The most interesting and original is that upon infantile scurvy. The book will well repay not only perusal but study, and might usefully be made the basis of a popular work upon the same subject.

RALPH W. LEFTWICH, M.D.

ARTICLE 2276.

The Causes, Treatment, and Cure of Stammering. By A. G. BERNARD, M.R.C.S., &c. London: J. & A. Churchill. 1889.

THE author's aim in this little work is to demonstrate to stammerers that with the exercise of reasonable patience, perseverance, and resolution they can completely cure themselves. The author first makes some remarks on the causation of stammering, and the frequency with which it affects various letters. In regard to the latter he says that, given an equal number of explosives and continuous consonants, it will be found, as a general rule, that stammering will occur twice with the former to every once of the latter, and given in the same way an equal number of continuous consonants and vowels, the stammering will occur half as many times with the latter as with the former. The author then gives twelve rules for the self-treatment of stammerers. These are followed by a long list of exercises, the careful, deliberate, and persevering repetition of which constitutes the chief element of treatment. The details must be read in the original, but perseverance appears to be the key-note of the treatment. The sufferer, we learn, is not likely to be cured under three months.

As the author speaks from personal experience his opinion is worthy the careful consideration of all stammerers. The scientific value of the work would have been enhanced had he given details of cases treated by his method.

E. CRESSWELL BABER, M.B.

ARTICLE 2277.

On the Physiology of the Vascular System. By M. P. M. COLLIER, M.B., B.S., F.R.C.S. London: H. K. Lewis. 1889.

THIS book is composed of three lectures delivered at the Royal College of Surgeons in London. It is devoted to the explanation of the phenomena of the circulation, and is certainly, whether one agrees with all the theories put forward or not, a book to be read with considerable interest. The first lecture deals with the contraction of the ventricle, and its effect upon the aorta, valves, and general circulation. On these points the author contends that the blood in the ventricle is sucked in from the great veins and auricles by the aspirating powers of the ventricle, that the musculi papillares commence to contract and approximate the valves before the ventricle is quite full, and that by the time it is fully distended they are approximated. As soon as the tension in the ventricle begins to rise they are closely approximated and rendered efficient. The tension in the ventricle now rapidly rises, more and more of the heart-substance being called into action. As soon as the tension in the ventricle exceeds that in the aorta blood commences to enter, the valves at the same time separating at their centres. The direct effect of the blood entering the aorta from the ventricle is an increase of tension and distention from the first part of the aorta, an increase in the rapidity of flow in the small arteries, and an increase of resistance to the ventricle. Towards the end of the systole the valves are nearly closed, and the last few drops of blood enter the aorta under a maximum of pressure and with small momentum, and lie above the corpora arantii. The blood thrust in by the ventricle occupies the centre of the lumen of the first few inches of the aorta. As regards the sounds of the heart he believes that the second is due to sudden change of pressure in the ventricle. The support below the valves being suddenly changed from a maximum to a minimum, they are strained, and, being consequently rendered suddenly more tense, vibrate. The second sound, thus, is a sound of tension, of stifled or abortive vibration. The first sound is due to the sound emitted by the contraction of the muscular fibres of the ventricle, as well as that emitted by the sudden strain that the closed parachutes are subjected to during the rapid contraction of the ventricle. Possibly another element may be the sudden strain which the aorta is subjected to during the systole of the ventricle. In dealing with the pulse the author asks how the enormous opposition to the flow of the blood in the capillaries of the liver is overcome. The systole of the ventricles takes no part, as shown by the low tension in the portal vein. The possible agents are (*1*) the rhythmical compression of the abdominal contents during respiration; (2) the aspiration of the thorax; (3) the aspiration of the right ventricle; (4) the last and least likely, the hepatic artery. Of all these factors he assigns the greatest importance to the diaphragm as the chief agent in compressing the abdominal contents.

BERTRAM C. A. WINDLE., M.A., M.D.

ARTICLE 2278.

The Modern Frankenstein. By G. M. GOULD, M.D. Chicago: The Open Court Publishing Company. 1889.

THIS paper, which is written in a bright and interesting manner, will well repay perusal. The thoughts which underlie it as summed up by the author are as follow: 1. The unvarying testimony of statistics and students of sociology is that the defective, dependent, and delinquent classes and suicide are, as a whole, in civilised nations, steadily and continuously increasing much faster than the increase of the communities supporting them; this shows that something is radically wrong as to the causes and the societies producing these classes; it is, indeed, a wrong that cannot fail in time to bring society to a very literal *reductio ad absurdum—seu ad lunaticum.* 2. Though not wholly, this wrong is found to consist chiefly in the vicious structure of society, economically and morally, in a perniciousness of ideal and custom that can but yield a percentage of criminality and mental wreckage. 3. The half-conscious, half-smothered feeling of this communal responsibility, co-operating with the criminal's efforts by legal technicality and by medical aid, has served to the same end by legalising and excusing crime in the community, only covering it with the cloak of insanity. 4. The aid rendered by a certain school of medical writers and experts to this morbid tendency has been based upon the theory that crime and mental disease are simply the effects of criminal or cerebral atypism and brain disease, and therefore anatomically necessitated. This theory is not only not proved, but is disproved by a number of unanswerable facts and considerations, and is a stultifying argument to use by those whose field of medical study has shown the least progress, and one in which therapeutics has hardly entered. 5. Our legal sentences should be divested and fall short of punishment, or of deterrent effects, the asylum and penitentiary should be combined, and put under one management, the clinical examination and study of the pathogenesis of these conditions furthered, and all with the sole end of cures by prophylaxis.

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 2279.

Contribution à l'Étude des Bactériacées (Schizomycètes). Le Bacille Mesentericus Vulgatus. Par WILLIAM VIGNAL, Docteur ès Sciences, Répétiteur à l'École des Hautes-Études. Pp. 191. Avec 45 figures dans le texte. Paris : G. Masson, éditeur. 1889.

THIS monograph gives a very complete history of one of the most widely disseminated of micro-organisms. The *bacillus mesentericus vulgatus* is one of two forms of bacillus which are found growing upon potatoes, and was so named by Flügge, but, because of its rapid growth upon potatoes, was called by Koch 'Kartoffel-bacillus.' It is found in the air, in water, in the intestinal tract, and in all decomposing bodies. A pinch of earth from the Jardin du Luxembourg, for example, contained 313 colonies of micro-organisms, and of these 41 were of the bacillus, and again, the earth from a wheat field contained 31 out of 287 colonies of this bacillus. Of the colonies of micro-organisms obtained from the air of Paris, those of this bacillus were in the proportion of 4 in 70; in Seine water 13 out of 442. When grown in veal-broth the bacilli are small rods, 2-4 millimètres long, and 1 millimètre broad; their extremities are rounded; the bacilli are seldom isolated, usually forming long chains; rarely rigid, as the links of the chain are usually inclined upon one another.

This is the micro-organism so carefully described. Its multiplication by division and by spores; its method of growth in gelatine, agar-agar, veal-broth, potatoes, and other media; its behaviour at various temperatures, and its resistance to antiseptics are dwelt upon at very considerable length; its ferment actions on albumen, gelatine, milk, and casein, sugar, and starch are demonstrated very accurately. There is an immense amount of research in this book, and the author is worthy of high praise. Taking a micro-organism, one of those which possibly used to be called bacterium termo, about which little was accurately known, Dr. Vignal has devoted great pains to drawing its life-history, the characteristics of its growth, and its effects upon the nutrient media employed. If the histories of all the known micro-organisms were as carefully investigated and written, the science of bacteriology would soon be placed upon a firm footing. The book is strongly recommended to all those engaged in the study of micro-organisms, and Chapters IX. to XVI., treating of the ferment actions exerted by the bacillus, are especially interesting.

VINCENT D. HARRIS, M.D.

NOTES ON BOOKS.

ARTICLE 2280.

Transactions of the Clinical Society of London. Vol. XXII. With Supplementary Reports of Cases, in Vols. I.-XXI. London: Longmans, Green, & Co. 1889.

THE Clinical Society has brought out its 'Transactions' for 1888-89 with its usual promptitude. Other societies, however, are prevented from issuing their annual publications so soon after the end of each medical year owing to the complicated nature of the papers read, and the diagrams and drawings exhibited at their meetings. Clinical memoirs are relatively simple for printers and publishers. Praise of the volume now before us would be superfluous. Criticism of the numerous good papers which it contains is impossible in these columns. A very important feature of the present issue cannot, on the other hand, be left unnoticed. In 1881, the Council of the Pathological Society decided to publish occasional 'Supplementary Reports,' in continuation of the histories of cases recorded in that society's *Transactions.* 'Reports' appeared, accordingly, in the thirty-third volume. The Clinical Society has followed the good example of the Pathological Society. The 'Supplementary Reports' have been drawn up with great care by a committee of ten members, Drs. Abercrombie, Crocker, Finlay, Maguire and Pringle, and Messrs. Bowlby, Silcock, Clutton, Pollard, and Turner, one physician and one surgeon out of the list working together. The committee have succeeded in securing a considerable number of after-histories. All honour to those who exert their utmost to render transactions and catalogues really useful and reliable.

ALBAN DORAN.

ARTICLE 2281.

Hepatitis and Hepatic Abscess: their Etiology and Treatment. By G. HARRISON YOUNGE, L.K.Q.C.P.I., Surgeon, Army Medical Staff. London: T. W. Danks & Co. 1889.

THE author of this instructive little work on Hepatic Inflammation and Abscess has evidently had much experience in the clinical observation and treatment of these diseases, and devoted much time to the study of their etiology. After describing the influences of a tropical climate on the hepatic functions, Dr. Younge argues in support of his view that the action of a severe chill on an exhausted and congested liver is the most frequent cause of abscess in this organ. He holds that only a very small proportion of the cases of hepatic abscess seen in tropical countries are dysenteric in their origin. In the clinical section of the treatise a full and clear description is given of the diagnostic symptoms of both acute and chronic abscess. The writer, in dealing with the subject of surgical treatment, agrees with most surgeons in preferring to aspiration the practice of free incision and drainage, made as early as possible. He does not deal quite so fully as might be wished with the surgical difficulties to be overcome in cases in which it is necessary to attack the abscess from behind, and at an elevated point of the thoracic wall. With regard to adhesions between the liver and the wall of the abdomen or chest, it is stated that their presence is by no means essential to the success of the operation. It is stated, however, that an abscess of the liver is seldom met with without parietal adhesions.

ARTICLE 2282.

The Fever of Over-exertion. By T. F. KNOTT, A.B., M.B., M.R.I.A. (Reprinted from the *Transactions of the Royal Academy of Medicine in Ireland.*)

IN this small *brochure* Dr. Knott attacks the subject of fever in general, and a certain kind of fever which he calls 'the fever of over-exertion' in particular. This latter form of fever, he tells us, is met with among the agricultural labourers in the west and south of Ireland. In the spring and harvesting seasons these labourers, who are in bad training from want of exercise or from insufficient or improper diet, are called upon for extra exertion, and not infrequently are subjected to violent muscular exertion for days together. This is often followed by a chill from careless exposure. Fever is now apt to commence, and the temperature goes up to 103° or 104° F. within a few hours. The fever continues and the patients waste, and, unless properly treated, in the course of some months succumb. The author traces this fever to the influence in the circulation of the products of muscular waste upon the central and local vaso-motor centres, producing first of all stimulation and later on exhaustion. Dr. Knott bases a good many additional observations on the general subject of fever upon the researches of Latham and Dr. D. Macalister; they are interesting from several points of view, but the author will agree with us that it would be impossible to treat adequately of these enormously difficult physiological and chemical problems in so short a space as he has had at his disposal. The treatment recommended for the fever above sketched is, free purgation, the exhibition of organic acids, and possibly bleeding, and when in a chronic stage, good diet and quinine and salicylic acid; change of air should then follow.

VINCENT D. HARRIS, M.D.

ARTICLE 2283.

The General Theory of Cancer Formation. By HERBERT SNOW, M.D.Lond., &c., Surgeon to the Cancer Hospital. Pp. 24. London: J. & A. CHURCHILL. 1889.

THIS little book consists of two lectures on Cancer Formation delivered at the Cancer Hospital. It treats concisely of the different kinds of cancer, which word is used throughout the book in its popular sense, to include malignant tumours in general. The origin of cancer is said to be from irritated protoplasm, 'such irritation being either direct or (perhaps more frequently) indirect through the medium of the central nervous system.' The author lays great stress upon the latter cause as one which, he believes, exerts a powerful influence not only as regards the genesis of the new growth, but also upon its subsequent course and phenomena. Altogether the little book is a readable, if somewhat popular, account of a very interesting subject.

VINCENT D. HARRIS, M.D.

ARTICLE 2284.

The Classification, Correct Dietary, and Treatment of Diseases of the Skin. By HENRY S. PURDON, M.D., L.R.C.P. London: Baillière, Tindall, & Cox. Belfast: William Mullan & Son. 1889.

THIS small manual is intended by the author to be of the nature of a note-book, and he has endeavoured in it to inculcate the use of what he conceives to be a rational system of dermatological therapeutics, based as far as possible on a knowledge of the physiological action of drugs. It contains in dictionary form remarks on the causes of various skin affections, with notes on the treatment in parallel columns. There are the usual formulæ, with some notes on dietary and analyses of various forms of vegetable food.

ARTICLE 2285.

Leprosy a Communicable Disease. By C. M. MACNAMARA, Surgeon to the Westminster Hospital &c. Second Edition. London: Churchill. 1889.

THIS is the second edition of a pamphlet published originally in Calcutta in the year 1866, the new edition containing references to the most salient facts and figures, recently published in connection with leprosy, which Mr. Macnamara believes to be a hereditary and communicable disease. He is of opinion that the germs of the disease pass from the parent to the offspring, and may pass from husband to wife if the former suffers from leprosy in its ulcerative form.

Much interesting information regarding the provisions for isolating lepers in England in former times is given in the pamphlet, and the antiquarian aspects of leprosy are touched on in an interesting manner.

A letter from Dr. Hillebrand, written at Honolulu in 1866, gives exact and interesting details regarding the origin and spread of leprosy in the Sandwich Islands.

The appearance of the *brochure* is opportune, and it should be read by everyone who is desirous of missing no point to which current literature alludes in regard to the spread and management of the disease.

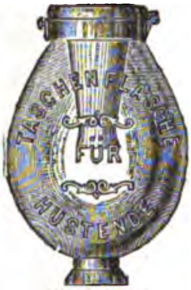
ANATOMICAL SUBJECTS.—The Hunslet Board of Guardians have received a request from the Leeds Medical School 'that they will direct, as they are empowered by the law to do, that the unclaimed bodies of persons dying in the Hunslet workhouse shall in future be handed over to that medical school for the purpose of dissection.'

THE new edition of 'Burroughs' Duplicate Prescription Book' contains fifty prescription blanks with carton and tissue paper to furnish copies. Although this is nearly twice the number put in the earlier editions, the price (2*s.* a dozen) remains the same.

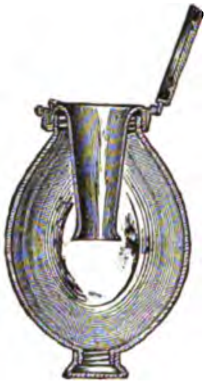
NEW INVENTIONS.

DR. DETTWEILER'S POCKET FLASK FOR THE DISPOSAL OF THE SPUTA IN PHTHISIS.

THE accompanying illustrations represent a small flask devised by Dr. Dettweiler, of Frankenstein, which he suggests every consumptive person should carry and always expectorate into, instead of depositing the sputa into handkerchiefs or on the pavement of the streets, on the floor of rooms, railway carriages, &c. It is thus hoped the great danger of infection arising from dried sputa when inhaled as dust will be minimised.



Flask closed.



Section of same, open.

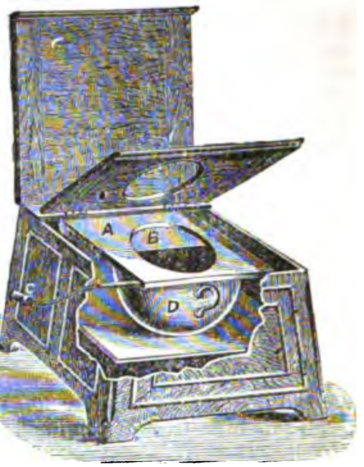
The small apparatus is constructed on the principle of the safe inkbottle, and is furnished with a closely-fitting spring lid at one end, and a screw-off mount for emptying at the other. Its contents may be disinfected by a solution of perchloride of mercury (1 to 200). The flask can be conveniently carried by male patients in the breast pockets of their coats, but is too large for females unless kept in a hand-bag or basket. A larger lower aperture would be an improvement, but, on the whole, it is an ingenious and handy contrivance to meet a great want.

Messrs. Krohne and Sesemann, of 8 Duke Street, Manchester Square, London, are the agents.

INVALIDS' 'ODOURLESS' COMMODES.

MR. FREDERICK TYERMAN has just patented an invention that may be said to be a very distinct advance in this necessary class of adjunct to the invalid's room. Like most good inventions, the principles upon which it is based are so simple that one wonders why they have not before been applied to such an apparatus. But though the completed article will doubtless meet with general approbation, on account both of its efficiency and simplicity, it is evident that so happy a result has not been attained without the expenditure of much thought and care.

The apparatus proper, which at small expense can be fitted to existing pieces of furniture, consists essentially of two parts, the pan D and the top A, with the sliding screen cover B, which in the engraving is shown partly drawn down. It will be easily understood that the object in view is to prevent, as far as possible, the escape of effluvia into the apartment, and this is practically accomplished by drawing the cover by means of the handle C, before the patient rises from the seat.



The contents of the pan are thereby at once hermetically sealed, and when desired the patent top A can be readily detached and the pan cleaned in the usual way.

The patent commodes may be seen at Messrs. Rolfe & Co., 33 Snow Hill, E.C.

THE THERMO-SAFEGUARD FEEDING BOTTLE.

MESSRS. BURROUGHS, WELLCOME, & CO. wish it to be known that they have acquired the patent for the Thermo-Safeguard Feeding Bottle from Messrs. Pocock, Keevil, & Co. Our readers are probably familiar with this ideal arrangement, the essential features of which are (1) a thermometer imbedded in the bottle so that the exact temperature of the contained food may be ascertained, and excess or deficiency of warmth avoided, and (2) the replacement of the usual cork stopper by one constructed of glass and soft pure rubber which admits of being easily cleansed. The box (the price of which is 2*s.* 6*d.*) contains a spare stopper and the necessary brushes, &c.

NEW PREPARATIONS.

EXALGINE.

THIS substance is another of the many derivatives of the 'aromatic' series of coal-tar products, and, in common with many of its fellows, it possesses therapeutical properties which promise to be of use, more especially in the relief of pain. All the bodies belonging to this series possess, in varying degrees, antithermic, antiseptic, and analgesic properties, and while some of them—the phenols, for example—are principally antithermic, the antipyretic and analgesic properties being masked, so to speak, others, such as antipyrine, are primarily antipyretic and secondarily analgesic. According to some researches which have been carried out by several French observers, exalgine differs from antipyrine by reversing the order of the effects produced, being primarily analgesic and secondarily antithermic. As exalgine has recently been introduced into England we shall shortly have an opportunity of putting these properties to the test of experience. If the drug only correspond to the description given by those who have investigated its physiological action, it will prove a valuable acquisition to our remedies for the relief of the symptom pain. Pain is by no means always associated with febrile elevation of temperature, and a drug which will act on it alone, without interfering with the thermogenetic apparatus, cannot fail to find a wide field of usefulness.

NOTICE OF MEETINGS.

ROYAL MEDICAL AND CHIRURIGICAL SOCIETY OF LONDON.

SESSION 1889-90.

Held at 20 Hanover Square, at Half-past Eight o'Clock, p.m.

1889.
Tuesday, Nov. 26.
" Dec. 10, C. Ballot.*

1890.
" Jan. 14 C.
" Jan. 28.
" Feb. 11, C. Ballot.*
" Feb. 25.
Saturday, March 1, Annual Meeting.
Tuesday, March 11, C.
" March 25.
" April 8, C. Ballot.*
" April 22.
" May 13, C.
" May 27.
" June 10, C. Ballot.*

Anniversary meeting, Saturday, March 1.

* On these evenings the ballot is taken from 8 to 8.30 o'clock.

CLINICAL SOCIETY OF LONDON.

SESSION 1889-90.

1889.
Friday, Nov. 22.—Council Meeting, 7.30; Papers, 8.30.
" DEC. 13.—Living Specimens, 8; Papers, 9.

1890.
" JAN. 10.—Annual Meeting; Papers, 8.30.
" JAN. 24.—Council Meeting, 7.30; Papers, 8.30.
" FEB. 14.—Living Specimens, 8; Papers, 9.
" FEB. 28.—Council Meeting, 7.30; Papers, 8.30.
" MARCH 14.—Living Specimens, 8; Papers, 9.
" MARCH 28.—Council Meeting, 7.30; Papers, 8.30.
" APRIL 11.—Living Specimens, 7.30; Papers, 9.
" APRIL 25.—Council Meeting, 7.30; Papers, 8.30.
" MAY 9.—Living Specimens, 8; Papers, 9.
" MAY 23.—Council Meeting, 7.30; Papers, 8.30.

THOMAS BARLOW, M.D., 10 Wimpole Street, W.
ROBERT WILLIAM PARKER, 8 Old Cavendish Street, W.
} *Hon. Secs.*

PATHOLOGICAL SOCIETY OF LONDON.

SESSION 1889-90.

The Meetiags will be held in the New Rooms of the Society, at 20 Hanover Square, W.

1889.
Tuesday, Dec. 3.
" Dec. 17, C.
1890.
" Jan. 7.*
" Jan. 21, C.
" Feb. 4.
Tuesday, Feb. 18, C.
" March 4.
" March 18, C.
" April 1.
" April 15, C.
" May 6.
" May 20, C.

* General meeting for election of officers.

N.B.—At the ordinary meetings of the society the chair is taken at 8.30 P.M.

SAMUEL WEST, M.D., 15 Wimpole Street, W.
RICKMAN J. GODLEE, 81 Wimpole Street, W.
} *Hon. Secs.*

PATENTS.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37 *Chancery Lane, London, W.C., from whom all information relating to Patents may be had gratuitously.*]

16,601. Improvements in dental pluggers. ALFRED BULT VERRIER, 54 Fleet Street, London, Oct. 21.

16,609. A new or improved process for the recovery or regeneration of nitric acid employed in the manufacture of chlorine. WILHELM WOLTERS, 47 Lincoln's Inn Fields, Oct. 21.

16,767. Improvements in infants' soothing teats. GEORGE JOHN FLAMANK, 30 Wolverhampton Road, Staffordshire.

16,816. An improved electro-medical apparatus. CORNELIUS BENNETT HARNESS, 45 Southampton Buildings, London, Oct. 29.

16,799. An improved appliance for use in surgical operations and for other purposes. SAMUEL LOWENBERG, 8 Quality Court, London.

16,962. A new or improved belt for supporting and holding sanitary and other towels and pads worn by women. CHARLES AUGUSTUS BROWN, 7 Staple Inn, Middlesex, Oct. 30.

17,195. Improvement in trusses for hernia. JOHN FOWLER & FREDERICK ALBON, 12 King Square, London, Oct. 30.

17,220. An improved device for facilitating the distribution, inhalation, and application of medicated and other powder. FREDERICK AUGUSTUS ROE, 45 Southampton Buildings, London, Oct. 31.

17,537. Improvements in body-coolers and fever-reducers and supporting frames therefor. EDWIN BELMONT MAGILL, 52 Chancery Lane, Nov. 5.

17,564. Improvements in bottles for containing poisons and noxious drugs. HENRY F. CATLIN, 76 Chancery Lane, Nov. 5.

17,718. Improvements in cradle splints. EDWARD STANMORE BISHOP, 64 Barton Arcade, Manchester, Nov. 7.

SPECIFICATIONS PUBLISHED.

18,056. CAMPBELL & BOYD. Chlorine. 1888. 4*d*.
15,641. SIMMONDS. Dentists' moulds. 1888. 6*d*.
17,367. PARKER & ROBINSON. Chlorine. 1888. 4*d*
7,511. CLARKE. Laryngoscope. 1889. 8*d*.
10,217. JULEENE. Liniment. 1889. 4*d*.

The above specifications published, may be had of Messrs. Rayner and Cassel, Patent Agents.

GOSSIP.

THE French Chamber of Deputies includes 48 doctors, 1 dentist, and 1 veterinary surgeon.

THE Diet of Bukowina (Austria) has decided to establish a medical faculty in the University of Czernowitz.

A SOCIETY of 'BROMATOLOGY' (? βρῶμα, food) has recently been established at Lisbon, under the presidency of Dr. J. T. de Souza Martins.

'FLYING' laboratories of toxicology and bacteriology are now attached to each Army Corps in Russia. All food for the use of the troops is to be carefully analysed.

PROFESSOR RICHET has resigned his position as surgeon to the Hôtel Dieu at Paris, on the ground of old age and infirmity.

DR. FRANCISCO ALONSO RUBIO, the leading gynæcologist in Spain, has been named a life Senator by the Spanish Government.

IT is stated that vaccination is being introduced among the natives of the Lower Congo by the doctors of the Belgian Expedition.

IT is officially stated that in the Sandwich Islands the proportion of lepers to the population now reaches the enormous figure of 1 in 40.

THE Municipal Council of Rome has determined to establish a School of Nursing which is to be under the direction of Professor Durante.

A BUST of Professor Adolf Bardeleben has been placed in the garden of the Charité Hospital at Berlin by his pupils and admirers on the occasion of his attaining his seventieth birthday.

THE Medical Faculty of Bâle is the only one in Switzerland that still refuses to admit female students. A petition praying for the removal of this restriction has recently been addressed to the Dean.

THE Austro-Hungarian Ministry of War some time ago ordered the medical officers of the army to use the chromic acid treatment in all cases of excessive sweating of the feet. They are to report results on Dec. 1.

PROFESSOR DRASCHE, of Vienna, has been decorated with the Persian Order of the Sun and Lion, in recognition of his attendance on the Grand Vizier at the time of the Shah's visit to the Austrian capital.

A NEW SURGICAL CLINIC was opened at Göttingen with much pomp and circumstance on Oct. 23. Several other buildings intended for the purposes of clinical teaching are in course of erection in the same University.

IT is officially stated that between July 1888 and August 1889, 60,385 *persons* died of cholera in the Philippine Islands. Both the authorities and the people seem to accept the situation as quite in accordance with the eternal fitness of things.

A COMMITTEE of the London County Council has recommended the establishment in London of a small institution for the treatment of insanity on the footing of an ordinary hospital. It has also been decided to enlarge the existing asylum accommodation at a cost of £40,000.

A NEW SURGICAL CLINIC in the University of Cracow was opened last month by the Austrian Minister of Public Instruction, Dr. von Gautsch. The accommodation for patients, teachers, and students is very complete, and the sanitary and other arrangements are designed in accordance with the most modern views.

THE number of students who have matriculated this winter session in the Medical Faculty of Coimbra, the only university of Portugal, is 117. In the Central University at Madrid the number of entries exceeds that of last year by 200. The 'bitter cry' of the overcrowding of the medical profession is beginning to make itself heard in the Peninsula.

AN epidemic of raphania, a convulsive disease due to chronic ergotism, is reported in the Wjatka 'Government' of the Russian Empire. The number of persons attacked amounts to 683, of whom 34 have died up to the present. The Kasan Medical Society has deputed Dr. Kondoratski to make a special study of the disease.

THE *Knishni Wjestnik*, the organ of the publishing trade in Russia, states that from 1878 to 1883 inclusive, the total number of books issued from the press in Russia was 12,570, being an average of 2,514 a year. Of these works, 741 were medical and 464 scientific.

AFTER some delay, the Chair of Anatomy in the University of Aberdeen, recently vacated by Professor Struthers, has been filled by the appointment of Dr. R. W. Reid, late Joint Lecturer on Anatomy at St. Thomas's Hospital. The value of the Chair is said to be £1,800 a year, and several well-known anatomists were candidates for the post.

AN ANGLO-AMERICAN MEDICAL ASSOCIATION has been established at Vienna which will supply all necessary information to English-speaking students who wish to avail themselves of the vast clinical material and highly organised system of practical teaching offered by the Imperial city. The address is 12 Landsgerichstrasse, the entrance fee one gulden.

CHOLECYSTENTEROSTOMY, which is now becoming a 'household word' in the mouths of English surgeons, was not long ago performed for the first time in France by M. Terrier. French surgeons claim credit for their want of operative enterprise apparently on the ground that it would be wrong to try new methods on the sacred persons of their countrymen till they have been fairly tested in *animâ vili* in England, America, and Germany.

THE Eighth Congress of Russian Naturalists and Physicians will be held at St. Petersburg from Dec. 27, 1889, to Jan. 7, 1890. It will consist of eleven sections, two of which are devoted to 'scientific medicine' and 'scientific hygiene' respectively. The organising committee includes the names of Drs. A. P. Dobroslawin and W. W. Paschutin, professors in the St. Petersburg Medico-Chirurgical Academy.

THE SECOND GENERAL CONGRESS of Italian Pharmacists was held at Rome in October. The Association numbers about 3,000 members. In addition to the purely scientific work of the meeting, the preparation of a new edition of the Italian Pharmacopœia and the subject of pharmaceutical education were discussed. A Congress of the Russian Pharmaceutical Societies was held at St. Petersburg on Oct. 21. Here also the professional education of pharmacists was a prominent subject of discussion. In connection with the Congress there was a pharmaceutical exhibition, which consisted chiefly of Russian products.

Prizes.

THE following prizes are offered by the Medico-Chirurgical Society of Bologna in 1891 :—1. The Sgarzi prize (500 lire = £20) for the best essay on 'The Functions of the Thyroid Body, Myxœdema and Cachexia Strumipriva.' 2. The Gajani prize (same value as above), for the best essay on 'Oöphorectomy in Severe Hysterical Neuroses.' The essays, which must be written in Italian, French, or Latin, must be sent to the secretary of the aforesaid society before the end of 1891.

THIRTY-EIGHT children at Motte-sous-Bois were vaccinated with lymph obtained from a child, 9 years of age, of strikingly healthy appearance. The vaccinal eruption showed itself from the second to the third day and promptly took on a violent inflammatory action. In nearly all the cases, within ten days, the three sites of inoculations had become merged in one large suppurating wound of unhealthy aspect. The base was grey, the borders hard, raised, regular, and surrounded with an inflammatory areola. In some of the cases the whole limb became strikingly œdematous, giving rise to fever, diarrhœa, and delirium. M. Hervieux admitted that the shortness of the period of incubation, the multiplicity of the lesions, their inflammatory nature, and the profuse suppuration, were all opposed to the idea of the infection being syphilitic. The Academy of Medicine declined to pronounce on the nature of the outbreak and postponed the discussion for some weeks.

Leprosy in Egypt.

DR. GREENE PASHA has been requested by the Prince of Wales to draw up a report on the prevalence of leprosy in Egypt. Ancient tradition points to Egypt as the birthplace of the disease, and it is certain that it is still one of its favourite haunts. Leprosy, as seen in Egypt, is chiefly of the tubercular type. It is not looked upon as contagious, and no attempt at segregation is made.

Midwives in Poland.

THERE are three classes of midwives in Poland—1, those who hold a regular diploma ; 2, peasant women who have obtained a certificate of the second class from a special school attached to the Hospital of the Child Jesus ; 3, women who have had no instruction whatever. There are 1,076 midwives belonging to one or other of the two first-named classes, but they are so unequally distributed that, whilst at Warsaw there is one midwife to every 716 women, in the country districts there is only one to every 300,000. According to a trustworthy authority, 76 per cent. of lying-in women in Poland are attended by midwives without diploma or licence of any kind.

First Congress of Polish Surgeons.

THE first Congress of Polish Surgeons was held at Cracow on Oct. 16 and 17, under the presidency of Professor Rydygier. Professors Stankiewicz, of Warsaw, and Obalinski, of Cracow, were elected vice-presidents. The subjects discussed included several of the prominent surgical questions of the day, and the Congress was a great success in its scientific, as well as in its social, aspects. Drs. Jasinski (Warsaw), Dembrowski (Wilna), Baracz (Lemberg), Wehr (Lemberg), Bugwid (Warsaw), Jakowski (Warsaw), Zielewicz (Posen), Peszke (Warsaw), Bogdanik (Biala), and others took an active part in the proceedings.

The General Medical Council.

DR. DONALD MACALISTER, of St. John's College, Cambridge, has been elected to succeed Professor Humphry as representative of his University in the General Medical Council. A strong effort was made by Cambridge men on the staffs of metropolitan hospitals to secure the return of Dr. Latham, but their candidate was beaten by fifty-four votes. Dr. D. MacAlister, who must not be confounded with Dr. Alexander MacAlister, the brilliant Professor of Anatomy at Cambridge, was Senior Wrangler in the days when that dignity meant much more than it does now. He is co-editor of the *Practitioner* with Dr. Lauder Brunton, and physician to Addenbrooke's Hospital.

Physiology at Cambridge.

DR. HENRY SIDGWICK, Knightsbridge Professor of Moral Philosophy in the University of Cambridge, having offered a sum of £1,000 at once and £500 within two years as a contribution to the expense of the proposed new buildings for the Department of Physiology at Cambridge on condition that the work is begun without further delay, the Financial Board has recommended that the offer be accepted, and that £3,500 more be furnished from the 'University Chest.' As extensive buildings are already in course of erection for the accommodation of the Department of Human Anatomy, the Medical School of Cambridge will, at no distant date, have one of the finest installations in the world—a gain both to the University and to medical science which can only be properly appreciated by those who remember that not many years back the medical faculty of Cambridge was in a condition of atrophy bordering on marasmus. Its revival, or, to speak more accurately, its creation is largely due to Professor G. M. Humphry, but Professor Michael Foster has been the architect of its brilliant fortune as a school of physiology and a centre of biological research.

The late King of Portugal.

THE Portuguese papers publish full particulars of the fatal illness of Dom Luis I., who died on Oct. 19 at the age of 52. Though the fact that his health was in any way affected was, as is customary in the case of royal personages, sedulously kept secret as long as concealment was possible, it is now known that the King had for some years past been suffering from diabetes. Two years ago a large growth appeared near the shoulder; it was diagnosed as a malignant lymphoma, but subsided under medical treatment. Other inflammatory swellings, however, showed themselves, and symptoms of myelitis supervened. The disordered state of the nervous system led to impaired nutrition of the skin which culminated in what Professor Neumann, who was summoned from Vienna, called 'multiple gangrene.' His Majesty suffered great pain, and death must have been a merciful release. His body was embalmed by the Sucquet method. Professor Neumann is said to have received a fee of 18 coutos de reis (about 4,032*l*.), in addition to the Cross of a Commander of the Order of Santiago de la Espada, for his trip to Lisbon. The following Portuguese physicians were in attendance on the King during his last illness:—Drs. José Eduardo Magalhães Coutinho, Antonio Maria Barbosa, Carlos May Figueira, Manuel Bénto de Souza, Joaquim Eleuterio Gaspar Gomes, Herculano de Sa Corrêa, Arthur Ravara, Antonio Maria de Lencastre, Francisco Augusto d'Oliveira Feijão, João Vicente Barros da Fonseca, and José Thomaz de Souza Martins. There is safety in a multitude of counsellors—at any rate, for the counsellors!

Medical schools in Turkey.

A HUNGARIAN journal gives the following particulars as to medical education in Turkey. In the whole Turkish Empire, including Egypt, there are five medical schools; two (one at Constantinople, the other at Cairo) which rejoice in the title of 'Imperial,' and three founded and kept up by missionaries, two at Beyrouth and one at Aintabia. The Medical Faculty of Constantinople was established by Sultan Machmud in 1833; at first the official language was French, but this is now gradually being replaced by Turkish. The curriculum extends over six years. Up to the present time 1,400 diplomas have been conferred by this Faculty. The Cairo school was established in 1827. The course of study there lasts six years and eight months. The average number of practitioners who yearly obtain their qualification from the Cairo Faculty is twenty. In the missionary schools the curriculum extends over four years, but they cannot give a legal licence to practise; in order to obtain this candidates must pass an examination at Constantinople or Cairo. Foreign practitioners have to undergo a *vivâ voce* examination, the scope of which, however, is merely to discover whether the candidate is a genuine medical man or not. This examination is usually held in French, but if the candidate is ignorant of that language he may be examined in any other, with the help of an interpreter if necessary.

Philippe Ricord.

BY the death of Ricord, which took place on Oct. 22, 'syphilography,' to use the words of an enthusiastic Spanish writer, 'has been placed in mourning.' The deceased surgeon, who had reached the advanced age of 89, at one time occupied a very prominent place in the medical world, as well as in the social life, of Paris. For many years he had one of the largest and most lucrative practices in Europe, but owing to his lavish generosity he was always more or less in financial difficulties. At one time it is said that a 'man in possession,' disguised as a secretary or clerk, was constantly at the great specialist's side as he sat at the receipt of custom, and to this functionary all the fees were handed over. At that very time Ricord was believed to be making £10,000 a year. His debts were paid by the late Emperor, with whom he was distinctly a *persona grata*, and he finally handed over his affairs to the management of his friends. Ricord never occupied the professorial chair. French professors, like Chinese mandarins, are appointed by competition, and Ricord was beaten when he stood for an appointment as *Agrégé*, a deputy teacher who may be called the understudy of the full-blown professor. He never tried again. But, though not a member of the professorial body, he was one of the most popular teachers in Paris. Napoleon's question, when anyone was mentioned to him for the first time, was '*Qu'est ce qu'il a fait?*' To answer this question with respect to Ricord would involve a review of the numerous writings which came from his graceful and prolific pen, but his work may, perhaps, be fairly summed up in the statement that he established the fundamental doctrine of 'dualism' on a firm scientific basis. If he was not the first to affirm the essential difference between 'hard' and 'soft' sores, it was mainly due to his teaching that it was generally accepted. His interest not only in his own speciality but in surgery generally remained unabated to the last; and only two months before his death he presided at the first meeting of the Congress of Dermatology and Syphilography in Paris. Ricord was, like Yorick, a 'fellow of infinite jest,' and his puns and good things were quoted all over Paris. He was a man of great kindness of heart, and set a noble example of punctuality in attendance at the hospital, and of delicate consideration even for the poorest patients. On one occasion, in a case where tracheotomy had to be suddenly performed for syphilitic stenosis of the larynx, Ricord sucked the tube—which was blocked with purulent discharge—not once, but several times. This to many persons will seem even a finer example of the 'enthusiasm of humanity' than applying one's lips to the tube in the case of a child suffering from diphtheria. Like Pasteur, Ricord never allowed science to interfere with his religious convictions. He died as he had lived—a firm but conscientious Christian, and instead of the civil burial now so much affected by the *esprits forts* in France his obsequies were celebrated with full ecclesiastical honours at S. Sulpice. Funeral orations were delivered over the grave by MM. Fournier, Peyron, Le Dentu, Péan, Horteloup, Riant, De Beaufort, Diday, and Mauriac. By his will Ricord has left 10,000 francs to the Académie de Médecine for the foundation of a biennial prize; 5,000 francs to the Société de Chirurgie, for a similar purpose; and 10,000 francs to the Association Générale des Médecins de France. To the Midi Hospital he has bequeathed his library, 'in memory of his twenty-nine years' service as surgeon and teacher in that hospital, to which he owed his reputation and his wealth.' It is proposed to perpetuate his name in a similarly appropriate manner in connection with the scene of his scientific labours and triumphs, by calling the Hôpital du Midi the Hôpital Ricord.

Anticipations of modern discoveries.

Professor Budin, in his recently published *Leçons de Clinique Obstétricale*, in speaking of the incubator for immature infants introduced by Tarnier in 1880, quotes a passage from *Tristram Shandy* in which such an invention is alluded to. 'This fœtus,' it runs, 'was no bigger than the palm of the hand; but its father, having examined it in his capacity of physician, and having satisfied himself that it was something more than an embryo, had it taken while still alive to Rapallo, where he showed it to Jerome Bardi and other doctors belonging to that place. They found that it lacked nothing essential to life, and the father, by way of experiment, undertook to complete the work of Nature and to employ for the development of the child the same artifice that is used in Egypt to hatch chickens. He instructed a nurse as to all she would have to do, and, having caused his son to be placed in a properly arranged oven, he succeeded in rearing him, and in making him take on all the necessary growth by the uniformity of an artificial heat exactly measured with a thermometer or some equivalent instrument.' Although this quotation does not in any way serve to invalidate Tarnier's claim to originality in his invention, it shows that the idea of the incubator was not new; indeed, it is considerably older than Professor Budin seems to be aware, for the passage which he cites is not Sterne's own, but is quoted by him in French in a footnote as from one 'Mich. Giustinian.' A more striking instance of anticipation is contained in Muratori's *Antiquitates Italicæ Medii Ævi* (t. 1, Mediolani, 1738, Dissert. 16, p. 906), where the parasitic nature of leprosy is hinted at. After speaking of the possibility of its origin from 'water, air, or food,' he goes on: '. . . . sive quod mundiciem minime curantes populi semel invectam luem (utpote quæ contactu non secus ac vulgaris scabies et pestilentia trahitur) vigere sinant, *fortasse vermiculis venenosis eam gignentibus et per hominum incuriam ex infectis in sanos repentibus*' [. . . . or whether nations, utterly regardless of cleanliness, allowed the disease when once imported (for it is communicated by contact just in the same way as common itch and the plague) to flourish among them, poisonous worms perhaps generating it, which through the carelessness of men crawl from diseased to healthy patients]. This is, no doubt, a very crude anticipation of Hansen's discovery of the bacillus lepræ, but the *idée mère* is there. Edward Jenner, the discoverer of vaccination, attributed consumption to the action of a 'little worm' more than half a century before Robert Koch was born. Pasteur's anti-rabic inoculations are foreshadowed in the following quotation from J. B. Salgues's *Traité des Chercheurs et des Curieux*, Paris, 1810-11, tome I. After saying that carnivorous animals alone transmit rabies, whilst graminivora may contract, but cannot communicate, the disease, he proceeds to say that it might be possible to obtain from these animals a milder virus, and to convey it to carnivorous animals, as the vaccinal virus is conveyed to species capable of contracting small-pox. . . . '*il serait peut être possible de trouver sur ces animaux un virus plus doux et de le transporter aux espèces carnivores comme on transmet le virus vaccin aux espèces susceptibles de la petit vérole.*' With a little determination it would no doubt be possible to find adumbrations of modern discoveries in casual remarks of authors who meant something quite different by them, just as Shakespearean enthusiasts find in their poetic oracle prophetic allusions to things that were never dreamt of in the Swan of Avon's own philosophy. Sir Richard Burton finds what he calls 'prolepses' of the bacillary theory of disease in certain mysterious passages in the 'Arabian Nights.' After that it is hardly surprising to be told, as we now are, by Professor M. A. Agnostakis of Athens (*La Méthode Antiseptique chez les Anciens*, Athènes, 1889) that the much vaunted antiseptic system is twenty-two centuries old, that it was applied by the ancients with the precision of a definite surgical method, and that the pathological theory on which it is based is fully set forth by Hippocrates in unequivocal terms in a special treatise. The Greek professor admits that the word 'antiseptic' does not occur in the works of the Father of Medicine, but he asks us to believe that when Hippocrates speaks of the *drying of wounds*, antisepsis in its strict meaning is intended to be conveyed. The professor gives a list of antiseptic substances which he says were used in surgical practice by the ancients; it may be some little consolation to Sir Joseph Lister to find that it does not include carbolic acid, corrosive sublimate, or the new 'double cyanide' dressing. After reading Professor Agnostakis's erudite, if somewhat unconvincing, treatise we are almost prepared to hear that antipyrin and chloralamid were used by Dioscorides and that Galen treated Alexandrian ataxics by suspension.

LITERARY INTELLIGENCE.

Professor Victor Horsley, F.R.S., is preparing a book on the Surgery of the Brain and Spinal Cord.—Professor Rudolph Virchow is busy with a new edition of his great work, *Cellular-Pathologie*, which he intends to have ready in time to offer as a *Festgabe* or 'festal gift' to the tenth International Medical Congress which meets next year at Berlin.—Dr. Jukes De Styrap's *Code of Medical Ethics*, a sort of *Whole Duty of* (*Medical*) *Man* designed to guide doctors in their relations to each other, is now appearing in an Italian dress in the *Gazzetta Medica Lombarda*. The translation, which is from the third edition of the original, is from the pen of Dr. Lodovico Coulliaux.—A third edition of the Dutch Pharmacopœia will appear in 1890.—The Spanish medical journal, *Revista de Terapeutica y Farmacia*, which ceased to appear some months ago, has come to life again under the direction of Dr. Larra y Cerezo.—A comparative compilation of all the pharmacopœias of Europe and North America, entitled *Universal-Pharmakopöe*, is now in course of publication by Messrs. Vandenhock and Ruprecht, of Göttingen. The editor is Dr. Bruno Hirsch.—The *Archiv der Pharmacie*, the organ of the German Apothecaries' Association, will, from the beginning of 1890, be issued under the direction of Professors Beckurts, of Brunswick, and E. Schmidt, of Marburg, in place of Professor Reichardt, of Jena, who vacates the editorial chair.—The new Spanish periodical *Revista Clinica de los Hospitales*, the eleventh number of which is now before us, has a most formidable list of editors on its title-page. Though its name would lead one to expect original papers of clinical interest, the bulk of it is made up of reports of some of the Congresses recently held at Paris, abstracts of papers, &c. The number contains only one original paper, a communication by Dr. Ricardo Pérez Valdés, physician to the Hospital General of Madrid, on intravenous injections of salt water in typhoid fever. The little journal is well got up and is excellently printed.—The celebrated syphilographer, Ricord, is said to have left behind him memoirs of his life which will be published in a few years. The title of the book is said to be *The Nineteenth Century seen with the Speculum*. If the deceased surgeon relates his experiences as frankly as this title would almost seem to imply, the book will be one of the most interesting to lovers of scandal that has ever seen the light.—A sixteenth edition of Dr. Rabow's well-known prescriber's *vade mecum* (*Arzneiverordnungen zum Gebrauche für Klinicisten und praktische Aerzte*) has just been published by Schmidt, of Strassburg.—A second edition of the late Dr. Otto Roth's useful *Klinische Terminologie*—a little work containing a full explanation of all the terms used in clinical medicine at the present day, with their derivations, &c., has lately been published at Erlangen by Besold. The book has been brought up to date by the editors, Dr. Gessler and Stintzing.

The London
Medical Recorder.

Article 2286.

MONTHLY MIRROR OF MEDICAL SCIENCES.

Medicine.

Phosphorus in diabetes.

Mr. Balmanno Squire has recorded* a case in which he observed that phosphorus given to a patient for eczema notably relieved diabetes, from which he was also suffering. The patient, a man aged 60, who had for a long time been affected with eczema of the face, neck, and upper limbs, was brought to Mr. Squire on Oct. 11. In addition to local remedies, 'perles' of phosphorus were prescribed 'for the improvement of the eczema.' There was some delay in commencing the treatment, and the patient did not begin taking the phosphorus till Nov. 1. One 'perle' was then taken three times a day for three days, after which time the dose was doubled. On Nov. 11, when Mr. Squire again saw the patient, the eczema was nearly well, and, in addition to that, very sudden and marked improvement had taken place in the diabetes. He had previously been obliged to get up four or five times in the night to pass water, but for some nights previous to his visit to Mr. Squire he had had no occasion to do so. The amount of urine passed in the twenty-four hours had notably diminished, and its colour, which had before been very pale, had become fairly natural. Thirst, which had tormented him greatly, was no longer troublesome, and he felt altogether very much better in health. Mr. Squire is not prepared with any theory to account for the beneficial effect of the phosphorus in this case beyond the somewhat oracular suggestion that, as the undue or prolonged administration of phosphorus is capable of producing fatty degeneration of the liver, this circumstance would seem to afford a clue to its marked action in controlling the diabetes. He also thinks it possible that the effect of the phosphorus may have been due to its action on the nervous system. It does not appear that there was any diminution in the amount of sugar passed in the urine.

Suspension in diseases of the spinal cord.

Professor De Renzi, of Naples, has published† his experience of suspension, which he has tried in thirteen patients suffering from various forms of disease of the spinal cord. Seven were cases of tabes dorsales, one of ataxo-spastic tabes, two of sclerosis *en plaques*, two of chronic meningo-myelitis, and one of meningo-myelitis from spinal hæmorrhage. In three of the seven cases of tabes no effect whatever was observed; it should be noted, however, that one of these three underwent the operation only once, another twice, and the third five times. In the four remaining cases there was improvement as regards the lightning pains, which in one case disappeared altogether, and in the others were very greatly diminished. The power of walking was much improved in all the four. In the case of ataxo-spastic tabes there was considerable improvement in walking. In the two cases of sclerosis *en plaques* there was marked improvement in the gait. Of the two cases of chronic meningo-myelitis, one was cured and the other greatly benefited. In the case of meningo-myelitis from hæmorrhage no effect was noticed. The treatment was well borne by all the patients, and no ill effects could be traced to it. Dr. De Renzi thinks these results on the whole tend to support the hypothesis that the remedial power of suspension in spinal affections is due to the fact that it breaks down adhesions of the meninges and improves the circulation in the cord.

Surgery.

Erasion of the knee-joint.

The question of erasion as against resection of joints in tuberculous affections is at present much discussed in the surgical world. A recent debate on the subject in the surgical section of the Royal Academy of Medicine in Ireland revealed a considerable divergence of opinion on the matter among experienced surgeons. Dr. Eulogio Cervera y Ruiz, director of the Encinas Institute at Madrid, has recently made a contribution to the controversy,* a brief abstract of which may be of some interest. He relates four cases, three of children and one of a young adult, in which he performed erasion of the knee-joint with gratifying success. He begins by stating that in his experience tubercular disease of joints, especially of the knee, has its starting-point in the synovial membrane much oftener than is generally supposed. To the objection that erasion may leave a tubercular focus in the substance of the epiphysis, he replies that the same thing may happen in resection. To guard against this danger, he in all cases, after having removed the synovial membrane, thrusts a strong slender drill into the substance of the epiphyses in different directions; the greater or less resistance which the instrument meets with in its passage through the bony tissue enables him to judge whether there is a tubercular focus or not. If no softened point is discovered nothing further is done, and the exploration does no harm, but if there seems to be any ground for suspicion as to the condition of the bone, resection is performed. The first case was that of a young man, aged 22, whose left knee had troubled him for three years. Milder measures having failed, erasion was performed in June 1888. In two months recovery was complete, and the patient is now 'in perfect health, general and local. He has a useful limb, of normal shape and length, with the movements of extension and flexion almost complete, and he walks without crutches without any trouble whatever.' In the second case the patient was a boy, aged 18 months, who was wasted almost to the point of exhaustion by septic fever and enteritis, kept up by tuberculous synovitis of the left knee. The upper pouch of the membrane was distended into a large tuberculous abscess, extending under the triceps femoris. Dr. Cervera y Ruiz operated in April of the present year, removing the whole of the synovial membrane and the wall of the subtricipital abscess—a proceeding which obliged him to dissect up nearly the whole of that muscle. In two months the wound had healed without suppuration, and the child was quite well, fat, and lively, with a useful limb, 'of the same length and with the same movements of extension and flexion as the other.' The third case was that of a girl, aged 11 years, whose knee had been diseased for three years, during which various kinds of treatment were tried to no purpose. Arthrectomy was performed in July 1889. In seventy days cure was complete, the child having a useful limb without the slightest shortening, and being able to walk without crutches. The movements of the joint are, however, somewhat deficient, and massage is being employed to restore them. The fourth case was that of a boy aged 10 years, and was in all respects almost identical with the last one. Except in the first of these cases, Dr. Cervera y Ruiz opened the joint by a transverse incision, sawing through the patella, the two parts of which were afterwards brought together with sutures. The Spanish surgeon, while removing the synovial membrane in its entirety, a proceeding which requires great patience, spares the ligaments when they are not actually diseased; this, in his opinion, contributes powerfully to the usefulness of the limb, whether the joint becomes ankylosed or not. Dr. Cervera y Ruiz, whilst advising that such affections should at first be treated by milder measures, emphasises the necessity of not losing too much time in this way; if a notable improvement is not observed in a few months recourse should be had to arthrectomy.

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* *British Medical Journal*, Nov. 30.

† *Revista Clinica e Terapeutica*, No. 8.

* *Revista de los Hospitales*, December 1889. P. 553.

Syphilis and malignant disease.

Dr. Eduardo Conte gives * some striking illustrations of the difficulties which often surround the diagnosis of syphilitic formations from cancerous and other malignant neoplasms. Though the subject is well worn, it is one of perennial interest to surgeons, as every one who has ever followed the practice of a hospital even for a few months must have known cases in which swelling or ulceration due to syphilis has been mistaken for cancer, with the result, possibly, that some organ (mostly the tongue) has been removed or mutilated without necessity. The opposite mistake is perhaps still more common, and under the plea of 'giving the patient a chance,' malignant disease is allowed to run on whilst precious time is lost in futile antivenereal medication. Under these circumstances, as Mr. Butlin well puts it, the 'chance' is given, not to the patient, but to the disease. Dr. Conte's first case was one of syphilitic disease of the lower lip in a married lady, aged 34, with two healthy children. She noticed a pimple on her lip, which, after some time, broke, the ulcer discharging a thin purulent secretion and showing a marked tendency to spread. It was repeatedly cauterised without effect, and the submaxillary glands became much enlarged. In the absence of any history or evidence of syphilis, the case was diagnosed as one of epithelioma, and the patient was urged to have the tumour excised. Dr. Conte, however, considering that the tumour was softer in the middle than elsewhere, and taking into account the brownish-red colour of the ulcer, the thin purulent discharge, the absence of hæmorrhage, together with the painlessness of the swollen glands, came to the conclusion that it was syphilitic, and treated it with iodoform, which effected a cure. Subsequently condylomata appeared about the anus and vulva, with a syphilitic rash about the body and enlarged glands in the neck and groin. The infection was traced to smoking cigarettes which a young man with mucous patches in his mouth used to light for the patient 'out of gallantry.' In another case an officer of the Italian navy, aged 45, had an ulcer on the scrotum which was diagnosed as malignant. The ulcer, which was on the right side of the scrotum, was circular in form, measured one centimètre in diameter, and had raised edges. There was a thin discharge, and the surrounding tissues were thickened; not far from the ulcer there was another one about half as large. The inguinal glands were enlarged. No history of venereal disease beyond a gonorrhœa in early youth could be obtained. Dr. Conte, nevertheless, diagnosed the case as one of subcutaneous gummatous nodules. Iodide of sodium was given internally; cotton-wool soaked in a 1 in 1,000 solution of corrosive sublimate was applied to the ulcers, and the same preparation was injected hypodermically to the amount of 1 centigramme a day, the patient, who would not listen to any hint that the disease was syphilitic, being led to suppose that it was morphia that was injected for the relief of nocturnal headache, of which he complained. Complete cure followed this treatment. The third case was one of enlargement and induration of the testicle, with infiltration of the surrounding skin and spreading ulceration. The patient denied all history of syphilis, although he admitted having had gonorrhœa, and the disease was diagnosed as malignant by several experienced surgeons, who advised castration. From the clinical aspects of the case, however, Dr. Conte was led to treat the disease on anti-syphilitic lines, and this resulted in complete success. A fourth case is related, in which a gummatous infiltration of the parotid gland was diagnosed as an adeno-sarcoma by several eminent surgeons. In this case, however, there was a clear history of syphilis. The case was, nevertheless, one of very unusual difficulty on account of the severity of the ulceration, and the occurrence of profuse hæmorrhages, which more than once placed the patient's life in jeopardy.

Treatment of erysipelas of the face.

An account is given by Señores D. E. Ganado and D. G. Durán* of a method of treatment which has proved highly successful in the hands of Dr. Huertas, of Madrid, in the treatment of erysipelas of the face. It consists of painting over the inflamed part with 1 in 1,000 sublimate solution, followed by the application of a covering of carbolised cotton-wool; this is done twice in the twenty-four hours. In twenty cases thus treated the spread of the inflammatory process was at once checked, the zone of redness being at once checked in its extension and remaining exactly as it was when the case came under treatment, and the disease entering on the desquamative stage on the second or third day. The authors claim that by this method the length both of the disease and of the period of convalescence was notably diminished, and that the complications frequently accompanying erysipelas were avoided. Constitutional treatment was at the same time not neglected, the *primæ viæ* being kept clear and tonics freely given. In the way of internal medication, however, most reliance seems to have been placed on the administration of Van Swieten's 'liquor,' a solution of corrosive sublimate in alcohol much used on the Continent. Even in cases which were admitted so late as the third or fourth day of the disease, the temperature was reduced and the local condition speedily improved by this treatment.

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* *Il Progresso Medico*, Dec. 1, 1889.

* *Revista Clinica de los Hospitales*, No. 12.

ARTICLE 2287.

MARANDON DE MONTYEL AND OTHERS ON THE DANGERS OF SULFONAL.[*]

No remedy of recent date has excited more rapid interest than sulfonal, since the announcement of its hypnotic qualities by Dr. A. Kast in the *Berlin klin. Wochenschrift*, No. 16, April 16, 1888. It has been tried wherever scientific medicine has been cultivated, and the reports have with few exceptions been favourable and even enthusiastic. It has been described as a medicine which produces something nearly resembling a natural sleep, with no bad after-effects, or indeed no after-effects at all, save that it leaves behind it a somnolent tendency easily renewed. This cumulative effect has of course to be considered when sulfonal is used in repeated doses. It was tried with success in neuralgia, angina pectoris, and various cases of distress and restlessness following bodily disease. Naturally it was welcomed by those who treat insanity, as in that affection sleeplessness is one of the most difficult symptoms to combat. All the drugs used as hypnotics in insanity have their objection, and in some of them the damage is not at first apparent, subtly confounding itself with the symptoms of the disease it is given to relieve. We have therefore to ask; are there any dangers in the use of sulfonal? In the first experiments, amongst which may be signalised those of Docters Funaioli and Raimondi of Siena, sulfonal is preferred to chloral, paraldehyde, hypnone, urethan, hydrate of amylene, and other new hypnotics, as a drug able to overpower insomnia in any of its forms without leaving any bad effect upon the head, heart, or bowels. These favourable results were confirmed by the observations of several German physicians. On the other hand Dr. Marandon de Montyel has either the merit of seeing the dangers of sulfonal, or has been singularly unfortunate in his trials of the drug. His observations were communicated to the Medico-Psychological Society of Paris at their meeting on March 25, 1889. In doses of two grammes he had found it fail to induce sleep, and in doses of four to five grammes it had caused, while leaving intact the sensibility to touch and the reflexes, a painful sensation of cold, with marked rigors. In the intestinal canal it produced nausea, vomiting, and diarrhœa, and in the nervous system paresis, almost paralysis, without any pain on pressure over the spine, vertigo, with loss of equilibrium, and a feeling of intoxication ending in stupor. In one of the cases cited the patient, a man affected by senile dementia, with great excitement, was given sulfonal in doses of five grammes. He staggered about like a drunken man, talked foolishly, and had a silly laugh; at the same time sleep was not obtained, so that, as Dr. Montyel observes, one can have all the inconveniences of sulfonal with its advantages. After citing other cases to the same effect, Dr. Montyel summed up in the following terms. One patient felt such a great weakness after the use of sulfonal that, in his delirium, he attributed it to a copious bleeding which his enemies had practised upon him. In three other lunatics the mental condition was rendered worse by the drug. One hypochondriac felt his weakness and anxiety much increased. Another, who had been put to sleep for eight hours, said that his persecutors had made up for this escape by visiting him during the day with vertigo, nausea, and weakness in the limbs. After having tried sulfonal in doses of from three to four grammes on 21 lunatics, 11 maniacal, 2 senile dements, 4 paralytics, 1 epileptic, and 3 alcoholics, he found alarming symptoms in the intellectual capacity in 20 cases, and disorders of motor functions in the same number of cases. The stomach was disordered in 10 cases; the bowels in 7 cases; and in 9 cases there were sensations of great cold with shivering. He found a dose of 2 grammes of no effect with lunatics, but, when given from 3 to 4 grammes, he recognised sulfonal as the most powerful hypnotic that he had ever used. He noted the cumulative action of the drug, and found that it varied considerably in its effects on different individuals. Dr. Montyel finished his address with the observation that in doses of 3 to 4 grammes, sulfonal is not a medicine, but a poison. Dr. Séglas had observed similar accidents to those reported by Dr. Marandon de Montyel, and that without giving more than 3 grammes of sulfonal. Dr. Auguste Voisin, who had used smaller doses, stated that he had obtained favourable results with his insane patients.

At the next meeting of the society (May 27) Dr. Voisin reported that he had tried sulfonal in seven cases in doses of from 1 to 2 grammes. Dr. Voisin had obtained for all his patients a peaceful sleep, lasting from seven to nine hours, without any bad after-effects. Dr. Marandon de Montyel was, however, ready to return to the charge. He had continued his experiments with sulfonal, and the results had destroyed his last hopes. He had given the drug to 25 patients, and in 13 cases the results were unfavourable. He found sulfonal the most treacherous remedy which he had ever used. Dr. Montyel was able to cite the experiments of Professor Mairet, of Montpellier, published in the *Bulletin Médical* of March 27 and 31. In doses of 2 grammes, Dr. Mairet found good results in 33 per cent. of his cases, but in these the agitation was not very great. When he went on, even with this dose, symptoms appeared in two or three days, so that he was obliged to stop the medicine.

The discussion was resumed at the meeting of July 29 by Dr. Febvre, who opposed the conclusions of Dr. Marandon de Montyel. He read the report of ten cases in which he had used sulfonal with good effect. He acknowledged that disorders of digestion occasionally followed its use, but did not think that these should forbid the employment of so valuable a drug. In a patient affected with cocainism and morphinism, sleeplessness had yielded to one gramme of sulfonal after chloral had been tried in vain. Dr. Vallon said that he had used sulfonal without meeting with the gastro-intestinal troubles described by Dr. Marandon de Montyel. Dr. Febvre recommended 4 grammes of sulfonal, followed by a smaller dose the next night. It is to be borne in mind that this quantity was used with lunatics, who often require very large doses to bring sleep. It appears from a report in the *Archivio* for September and November 1889, that Schwalbe has noticed a sensation of weariness, giddiness, nausea, vomiting, and diarrhœa follow the administration of sulfonal, otherwise he obtained good results, especially in nervous insomnia. Engelmann observed an eruption after its use, which disappeared in three days; and Dr. Schotten observed a similar eruption in one case, accompanied by nervous and gastric disturbance.

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[*] *Archivio Italiano*, 1888, fasc. v. e vi., and 1889, fasc. v. e vi. *Annales Médico-psychologiques*, Janvier, Mars, Mai, Juillet, et Novembre, 1889.

Dr. Garnier, medical superintendent of La Charité (Nièvre), (*Annales*, No. 2, 1889), tried sulfonal as a hypnotic in insanity in seventeen cases and also on himself and one of his staff. He observed vomiting in 5 per cent. and diarrhœa in 17 per cent. of his patients. The doses which he has found efficacious varied from 2 to 5 grammes.

Doctors Pachoud and Claret, physicians to the Asylum of Bois de Cery in Switzerland (reported in the *Annales*, No. 2, 1889, p. 301), found no untoward results in the use of sulfonal, which they tried in four maniacal cases with good effect. They found that they could give doses of 5 grammes twice in the twenty-four hours without any inconvenience.

Altogether the reports in favour of sulfonal much outweigh those of the opposite tendency.

At the last meeting of the Medico-Psychological Association, held at Edinburgh on the 14th ult., Dr. Mackenzie, assistant in the Northumberland County Asylum, read a well-written paper on sulfonal. He stated that he had derived much benefit from its use in insanity. The paper will probably appear in the *Journal of Mental Science*.

W. W. Ireland, M.D.

Article 2288.

FICK AND HESS ON UNEQUAL ACCOMMODATION IN HEALTHY EYES AND IN ANISOMETROPIA.*

The writer of this paper believes that the view generally held that the accommodative impulse sent to each eye is necessarily equal is erroneous.

The accepted view rests upon, or has been confirmed by the experiments of Hering, Donders, Schweigger, Rumpff, and others; the writer briefly describes these, and objects to the conclusions drawn from them, since although they proved that under the conditions present the artificial or natural difference between the eyes was not neutralised by an unequal accommodation, they do not prove that no unequal accommodation took place, or that there might not be a greater inequality under more favourable conditions.

It must, of course, be borne in mind that an unequal accommodative impulse and unequal accommodation are not synonymous terms, and the following are conceivable conditions:—1. Equal impulses to both eyes resulting in (*a*) equal accommodative effect, (*b*) unequal accommodative effect. 2. Unequal impulses resulting in (*a*) unequal effect, (*b*) equal effect.

The author believes that previous attempts to produce unequal accommodation have failed from two causes; it has been attempted to produce too great a difference, and the desire for binocular vision has not been sufficiently strong.

He employed the following test:—Duplicate copies of a page of printed matter are taken and are placed, one in front of each eye, prisms with their bases outwards being employed to combine them; on each side a few words, or portions of words, are here and there erased, different words on the two sides being so treated. If both eyes are accommodated for the print, the gaps on one side are filled in by the other and the reading appears to be continuous. This test has two obvious advantages; it gives a great stimulus to binocular vision, and it allows a comparison to be readily made between the clearness with which the letters are seen with the two eyes. But it has the disadvantage, which is not pointed out by Dr. Fick, that the reading of type at a few inches' distance is a somewhat coarse test.

In experimenting with normal eyes convex lenses were added to the right eye, the strength being gradually increased up to 1·5 D., then concave lenses were added to the left, the right still carrying the +1·5; it was found that with −1·0 D. before one eye, and 1·5 D. before the other—*i.e.* a difference of 2·5 D.—binocular vision was possible, but required great exertion.

Almost all the subjects complained of a feeling of exertion and rapid weariness the moment that the difference exceeded 1·5 D.; under these circumstances, too, the vacant spaces were first seen, and it was only after an interval the missing words became visible. In every case the vision first became indistinct in the eye with the convex lens, the blurring would alternate between the eyes, the experiment always terminating by both eyes seeing the print indistinctly. It was found that by practice a greater difference could be overcome.

The question at once arises whether in such experiments as these the eyes read the print by correcting the difference in the accommodation or in spite of it. It became necessary, therefore, to ascertain what error of accommodation an eye could tolerate under the given conditions. Having rendered an eye artificially myopic by means of a convex lens, the print is placed at the far point and the lens strengthened. The author found that an 'average optical defect of 0·25 did not interfere with reading, but that with a defect of 0·50 reading became more (mere?) guesswork.'

[We must confess to a certain amount of scepticism as to the accuracy of these results; they are certainly inconsistent with what we know of the behaviour of all ametropes. In claiming such very definite results we think the author has lost sight of the coarseness of the test. The ability to read type, which is equivalent to No. 1 of Snellen's reading types, at 50 c.m. only requires a visual acuity of $\frac{6}{12}$, and it is contrary to all experience for slight differences in refraction to be noticeable in a test which does not, at any rate, approach the patient's visual limit. It is impossible to avoid a suspicion that as much trouble was not taken to overcome the difficulty in the monocular experiment as in those in which both eyes were used.—*Rep.*]

If we accept the results of these experiments, it is evident that to obtain binocular vision a difference in the accommodation of the two eyes, amounting to at least 2·5 D., is possible, for there was a total difference of 3·5 D., and according to the last experiment one eye may have accommodated 0·5 too much and the other 0·5 too little.

A good deal of the paper is occupied in showing that the interference with vision is the same, whether too much or too little accommodation is used, the size of the circles of diffusion in each case forming the basis of the calculation. Strictly speaking, the circles of diffusion are a little larger when the rays are focussed in front of, than when they are focussed behind the retina, but that with an ametropia of not more than 1·5 D. the difference is infinitesimal. It is unfortunate that the diagram, being wrongly drawn, appears at first sight to prove the opposite. The possibility and even the frequency of 1 (*b*), or an equal impulse to accommodation producing a different effect in the two eyes, is not disputed.

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* *Archives of Ophthalmology*, September 1889.

The most important part of Dr. Fick's paper, from a practical point of view, is the bearing that it has on the correction of cases of anisometropia. It is usually stated in text-books that with eyes of unequal refraction the accommodative impulse and its result are the same for both eyes. The author thinks that there are two difficulties in accepting this view. 1. That in spite of a considerable difference in the refraction of the eyes, normal binocular vision may be so perfect as to satisfy Hering's drop-experiment. 2. That complete correction of the anisometropia by lenses of different foci is not well tolerated in a majority of cases, and that the patient feels more comfortable with lenses of nearly the same strength before each eye.

The author does not seriously consider the first objection, and the answer to it, it seems to us, is simply that Hering's test, although an excellent one for proving the existence of a kind of binocular vision, by no means requires it to be perfect, in the sense of each eye seeing well.

Several examples of anisometropia are given which are thought to prove that unequal accommodation takes place. 1. Right eye, M. 4 D.; left eye, E., with −4 D. before right eye binocular reading, but image in right eye not so distinct as those in left eye. The most comfortable correction was right eye −2·5 D., left eye plane, a combination which would, of course, necessitate 1·5 D. of accommodation in the right eye less than in the left eye. The range of accommodation in the left eye was 10 D. and in the right eye 8·5 D. The author thinks that this is an example of two unequal impulses and unequal result. But we think that he has not considered the possible explanation that it was really a case of 1 (*b*), or of equal impulse, with unequal effect; the fact that range of accommodation in the right eye was less than that of left eye by this amount is consistent with this view, as is also the fact that anatomical differences exist between the ciliary muscles of an emmetropic and myopic eye.

The author believes that the axiom that unsymmetrical accommodation is impossible must be abandoned, and that 'into its place steps the fact that even under physiological conditions the accommodation of one eye can act independently of the other, independent, however, only between certain limits. But this unequal accommodation can only be obtained by a perceptible and sometimes painful exertion, and the eyes only bring it into use in so far as it is indispensably necessary in the interest of the act of vision.'

It seems to us that this paper opens up new ground and affords sufficient ground for re-examining this question, but that to solve it we require a much larger number of experiments, and much more delicate tests. It is not at all unlikely that the statement that the two eyes necessarily accommodate equally is as accurate as, but not more so than, that the upward and downward movements of the two eyes occur together. It is now known that many people can by an effort overcome a weak prism with its base upwards or downwards, and it is not at all improbable that we shall find that although symmetrical stimulations of the ciliary muscles are the rule, yet that slight inequalities in the effect produced are not uncommon.

Hess on the Supposed Power of Asymmetrical Accommodation[*] should be read in conjunction with the above. It points out that the tests employed are not sufficiently fine for the purpose, and that if smaller type is used a very slight difference in the refraction of the two eyes will render the words seen by one of the eyes indistinct. The author also experimented by stretching a fine silk thread across the type before each eye, and he then found that with a difference in refraction of only 0·25 D. one of the threads always became invisible or blurred, even although the type might still be read. The writer concludes from these experiments, and others on anisometropes, that a difference of 0·25 D. in the accommodation of the eyes is impossible, and as this amount is too small to allow errors of observation to be eliminated, the accepted teaching of the older authorities that asymmetrical accommodation is impossible, is correct.

W. Adams Frost.

Article 2289.

DELBET ON FLUSHING THE PERITONEUM.

An important monograph on this subject appeared in the *Annales de Gynécologie et d'Obstétrique*, September 1889. A summary of Dr. Delbet's conclusions cannot fail to interest all who perform abdominal sections.

1. When the peritoneal cavity is washed out, after the fashion practised by ovariotomists, &c., the liquid spreads over the entire surface of the peritoneum, including the flanks, iliac fossæ, undersurface of the liver, and the diaphragm. This fact was proved by flushing the peritoneum of a dead subject with water containing a dye. Hence, should the surgeon object to leave much fluid behind he must dry with sponges the distant parts of the peritoneum above indicated as well as Douglas's pouch. The danger of diffusing septic matter generated in pelvic organs is evident.

2. Flushing the peritoneum cannot completely remove foreign bodies. Noxious fluids are removed by displacement till little, if any, of their noxious dissolved principles remain in the peritoneal cavity; but solid matter, even in fine division, cannot be thoroughly displaced, as Dr. Delbet has proved by some delicate researches. Still, large clots and masses of cyst-contents are easily removed by flushing, and that process can at least dislodge so much solid matter that the little inevitably left behind is hardly sufficient to do any harm.

3. A certain amount of fluid always remains in the pelvis, iliac fossæ, and flanks after flushing carried out in the fashion practised by specialists. This fact involves a caution already suggested after the first of Dr. Delbet's conclusions.

4. Flushing the peritoneum with water of a temperature of from 18° to 50° C. (64°·4 to 122° F.) has little or no effect on the respiration and the circulation. 'Il n'expose à aucun danger de ce côté.' This statement might be seriously misunderstood. Hence, Dr. Delbet is careful to add that, though flushing with relatively cold water may produce no marked physiological effect on the circulation or respiration, it may be nevertheless very dangerous. It must chill the intestine, and that greatly increases shock. Polaillon's cases (*see* London Medical

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[*] *Archiv für Ophthal.*, xxxv., i., 157. A good abstract of this paper will also be found in the *Ophthalmic Review*, p. 169.

Recorder, vol. i., 1888, p. 451) are obscure; the two which recovered from the shock following flushing of the peritoneum were reported without details. The fatal case, in Dr. Delbet's opinion, might have died from the effects of chloroform or carbolic acid poisoning. It is best that the temperature of the water be 38° to 39° C. (100°·4 to 102°·2 F.)

5. The hæmostatic action of flushing with water at a high temperature appears doubtful, judging from Dr. Delbet's experiments. Flushing may possibly arrest bleeding by favouring coagulation, and by causing contraction of the plain muscular fibres in the vessels and tissues touched by the hot water. These effects were, however, not observed in Dr. Delbet's experiments.

6. A considerable quantity of water is absorbed during the first few minutes after the flushing has commenced. When a solution of seven parts of table-salt to 1,000 parts of water is employed, true indirect transfusion occurs. Pus and fæcal or putrid matter should be removed before flushing, lest they should cause absorption of septic material.

7. Experiments show that the peritoneum can be washed with toxic solutions without danger of poisoning the patient. The toxic flushing must be preceded by ten minutes' flushing with the salt solution above mentioned, and followed by a third flushing, the salt solution being employed again. In this way all excess of the poisonous material will be removed from the peritoneum. Dr. Delbet bases the above conclusion on experiments made on dogs, sulphate of strychnine being used. He suggests that carbolic acid and other poisonous antiseptic agents might thus be employed to destroy local sepsis without danger through absorption into the blood. The phenomenon in question apparently depends on the fact that the blood is hydrated to such an extent by the first flushing that it cannot absorb any of the poison in the fluid used for the second flushing.

Altogether, Dr. Delbet believes that flushing the peritoneum is most valuable in peritoneal surgery, and free from any serious danger.

Alban Doran.

Article 2290.

CHIEVITZ ON THE AREA CENTRALIS RETINÆ.[*]

The author, having examined the eyes of the following amongst other vertebrates—Rana esculenta, Emys Europæa, Lacerta viridis, Crocodilus intermedius, Anser cinerius, Fringilla canaria, Columba livia, Felis domestica, Mustela erminea, and Homo, has been led to the following conclusions:—

1. The area centralis retinæ is a part of the retina which differs from the rest in special features of structure, and particularly in modifications whose significance at least in part consists in certain advantages to the sense of sight which are due to them.

2. An area centralis does not exist in all vertebrates. It is to be found, however, in representatives of all classes, but appears, in its occurrence, structure, position, and peculiarities, to stand in no relation to the affinities of the animals.

3. A fovea centralis may be co-existent with the area—that is, the vitreous surface of the latter may be more or less depressed. An area occurs not unfrequently without a fovea, but if the latter is present it is always situated upon a part of the retina which may be looked upon as an area, and is to be regarded as more than an accidental addition to it. This is in correspondence with the development, since in the fœtal retina an area first is formed and afterwards a fovea.

4. The form of the area, with or without a fovea, its extent and position in the retina, are constant in each species, but different in unlike animals. Most frequently a round area is found, on which a fovea of varying depth may be placed. Exceptionally there is a streak-shaped area, which may stretch across the whole eye. There may be two round foveæ in one retina. Combinations of round and streak-shaped areæ and foveæ may occur, one round and one streaked, or two of the former with one of the latter may be observed together. The presence of several areæ in one retina has, up to the present, only been observed in birds.

5. Numerous variations occur in the finer structure; but some structural relations co-exist which were repeatedly found in all the forms examined, and to which on this account, as well as on that of their nature, should be attributed a special significance. There are two chief peculiarities which are associated with all areæ:—(*a*) That all or only certain elements of the layer of cones exist in a relatively greater number to the surface of the limitans externa, and are consequently smaller; (*b*) that a greater share of inner granular cells, and also a greater portion of ganglion optici, belongs to each visual cell. A greater sharpness of sight will follow from the first peculiarity. With regard to the second, from the greater proportionate size of ganglion to the outer granular layer, the conclusion may perhaps be drawn that there is a more distinct path to the visual cells; but what the simultaneous enlargement of the inner granular layer means must remain an open question, and more especially so since the course and functional action of the conducting paths of the retina are still by no means well known. It is not without interest to observe how retinæ behave in the region of the area according to whether they belong to the group with a relatively thinner or relatively thicker outer granular layer. Thus whilst the ganglion optici and the inner granular layer increase in size in all cases, in the first group the thin outer granular layer is thickened, whilst in the second it suffers a diminution in depth, all of which again correspond to the behaviour of the rods and cones.

6. The following may be mentioned as inconstant peculiarities of structure in the area. (*a*) Radiating course of optic fibres. (*b*) Oblique arrangement of the elements of the inner granular layer, sometimes with crossing between the radial fibres and the other parts. (*c*) Sometimes also in superficial view, or on sections, an arrangement of the inner granular cells in rows which are oriented towards the centre of the area, so that the rows of cells in a round area extend from the centre, and in a streak-shaped area are arranged parallel to the two sides. (*d*) The appearance of bands free from cells in the inner granular layer. (*e*) The fibrous extension of the optic cells at the vitreous surface, as well as the choroidal. (*f*) Lengthening or shortening of the rods and cones, with corresponding projection or depression of the limitans externa.

Bertram C. A. Windle, M.A., M.D.

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[*] Chievitz, J. H.—*Untersuchungen über die Area Centralis retinæ.* (*Arch. für Anat. und Entwick.*, Jahrg. 1889, Suppl. Band, S. 139.)

Article 2291.

KORKANOFF ON INFECTION THROUGH THE INTESTINAL CANAL.*

At the suggestion of Emmerich, the author undertook to answer the question, by means of experiments on animals, whether microbes possess the power of penetrating into the healthy intestine and infecting the animal organism. Quite different views upon the subject have hitherto prevailed amongst specialists; for example, Koch and Pasteur may be mentioned. Koch stated in 1877 that the spores of anthrax can enter into the organism not only through injuries or abrasions of the skin but also through the respiratory and digestive tracts. In order to prove that the latter was a possible source of infection, he fed mice for several days with the organs of sheep and rabbits which had died of anthrax (spleen, powdered blood, both fresh and that which had been kept dried for some time, all of which containing quantities of anthrax-spores), and found that they remained free from the disease. A similar result was also obtained by him when rabbits were experimented with. Koch therefore concluded [in spite of his former statement.—*Rep.*] that with these animals, at all events, intestinal infection is not possible. Pasteur and Toussaint also performed feeding experiments by adding cultures of anthrax to the fodder of sheep, and some of the animals became affected. The same observers, in later experiments, added to the fodder, plants (such as thistles, the hairs of wheat ears, barley and roots), which were likely to mechanically injure the mucous membrane of the mouth, and the number of infected animals which died greatly increased. Pasteur concluded from these experiments that the infection from the intestinal tract is probable only when the mucous membrane is injured. Toussaint arrived at a similar conclusion. Koch and his pupils, Gaffky and Loeffler, experimented with sheep and arrived at the conclusion that anthrax-bacilli perished in the stomachs of these animals, but that the spores penetrated the intestinal mucous membrane and led to a general infection. Later on they experimented with small quantities of dried spores, which had been kept in that condition for some time, and concluded that the spores of anthrax in some cases, when administered in that state, remained without effect. With small quantities of more recent spores, however, the sheep died, but rather later than usual (six to twenty-two days). In such cases there might be a question of a secondary infection, caused by the excrement of the animal becoming mixed with the food. Koch and his pupils, however, came to the general conclusion that large quantities of spores are just as certain to cause in sheep general infection when given with the food as if inoculated through the skin.

These experiments in the case of other animals (guinea-pigs, rabbits, and mice) did not give a constant result.

Buchner also occupied himself with the question whether micro-organisms are capable of penetrating from the respiratory and intestinal tracts. For his experiments he used white mice, which he caused to inhale for from one quarter to two hours the spores of anthrax mixed with indifferent stuffs, such as talc, magnesia, ashes, starch, and common dust. All the animals perished within a short time—one to three days. Quite different were the results of the feeding experiments with anthrax-spores. In these, by far the greater number of the mice did not perish. It was at the same time proved that the excrements of these animals contained spores which, when inoculated into other animals, could produce the disease: this was not possible when they were fed with anthrax-bacilli themselves. It generally required a considerably larger quantity of anthrax-spores to produce a general infection through the intestine than was the case with inhalation experiments. Falk also found that anthrax-bacilli introduced into the intestine remained without effect, but that, on the other hand, when the animals were fed with anthrax-spores, positive results were usually obtained. Orloff, occupied with the question about the power of penetration possessed by the staphylococcus pyogenes aureus (as, for example, in osteomyelitis, ulcerative endocarditis, and the like), tried to introduce the micro-organisms into the animal organism partially through the intestine and partially through the lungs, in the normal as well as in the morbid state, with artificially produced local disturbances. For the feeding experiments he made use of a mixture of oats and cultures of the above-mentioned microbes. The animals bore this feeding splendidly for from one and a half to three months. Their blood gave no cultures, but from the contents of the colon cultures were obtained, some of which were of the staphylococcus pyogenes aureus. Similar experiments were also made after previous irritation of the digestive organs. The result was always the same. Orloff is of the opinion that the epithelium of the digestive tract protects it against the penetration of the microbes, and, according to his opinion, pathological conditions (solutions of continuity) must exist at the point where the microbes penetrate, in order that they should be able to penetrate at all into the general circulation and further spread. Flügge supposes, from the experiments of Wyssokowitsch (with staphylococcus aureus, bacillus indicus, and spores of bacillus subtilis), that microbes are not able to penetrate into the circulation from the intestine or from the respiratory organs as long as the mucous membrane is intact, but, if this is not the case, the microbes get into the nearest lymphatic glands. With regard to anthrax, however, Flügge shares the view that the bacilli themselves are unable to pass through an uninjured mucous membrane, but that this property is possessed by the spores of anthrax. Baumgarten is, on the other hand, rather in favour of the view that the microbes can penetrate from the intestine, especially sporeless anthrax. On the contrary, according to him, their power of entering the organism through the respiratory tract is rather problematical. Again, in his opinion, certain animals have a particular predisposition for infection in this or that way, *e.g.* cattle which are less disposed for inoculated anthrax perish when fed with anthrax-spores. The opposite takes place with mice, rabbits, and guinea-pigs.

In general, then, it may be said that feeding experiments produce negative results, with the exception of those with anthrax, and that even with respect to anthrax, the views of different investigators vary much. The chief difficulty with regard to the discussion of this question consists in this, that the possibility of the entrance of the microbes in other ways cannot be eliminated.

The author suggests, as the most rational way of deciding this question, the examination of the intestinal walls at different periods after the feeding. In following out this plan he experimented with mice, rabbits, and guinea-pigs with several microbes (Neapolitan bacilli of Emmerich, anthrax and the bacteria of chicken cholera), and these were administered to the animals experimented with, either with the stomach-sound or with their food (white bread and powdered biscuit), the gastric juice being in some cases neutralised with soda. Generally to one-third of a test-tube full of powdered biscuit, 4–8 anthrax cultures upon potatoes or agar-agar were added; cultures of Neapolitan bacilli, or gelatin, and chicken cholera bacteria in bouillon. With the latter, when the culture contained a sufficient number of bacteria, non-sterilised pieces of bread were soaked. The infectiveness of the cultures and biscuits thus prepared was controlled by direct subcutaneous inoculation. The author sometimes used for his experiments the organs (liver, spleen, and kidneys) of animals which had died from anthrax, for which purpose he added to the same after due preparation small quantities of sterilised water. The mixture was then filtered through a net (sieve ?), and introduced directly into the stomach. The investigation thus made by the author with rabbits and white mice produced no constant results, and guinea-pigs that had been fed with cultures of Neapolitan bacteria remained alive with the exception of a few which perished accidentally. The rabbits fed with the microbes of chicken cholera all perished. From his experiments the author reasons that only the feeding experiments with chicken cholera lead to positive results; and that, on the other hand, feeding experiments with other bacteria are not constant in their effects. It must be here remarked that positive results are capable of another explanation. The author set himself the task of examining with the microscope the intestinal walls of the infected animals which had been killed at different periods after the feeding. As a sufficient number of sheep were at his disposal, these animals, according to Baumgarten being best fitted for feeding experiments with anthrax-bacilli, he experimented with white mice, which, according to his experience, possess a considerable predisposition to intestinal infection. He did the experiments in the following way:—He took three to seven mice, starved them for eight to twelve hours, and gave to all of them a few dishes of biscuit mixed with anthrax-spores. After a part of this food was consumed he supplied fresh amounts. After certain defined periods, he killed the animals with chloroform, and placed the stomach and intestines, after removal, in 70 per cent. alcohol. In this way he obtained the intestines of eighteen mice (maximum, 48 hours; minimum, 5 hours), and took single pieces of the intestines, cut and examined the sections for micro-organisms, after staining with Gram's method. The author was unable to prove the presence of bacilli either in the intestinal walls or the lymph apparatus of the intestine (solitary follicles and Peyer's patches). As regards the spores of anthrax, however, since numerous anthrax-bacilli were found lying upon the epithelium, it was justifiable to suppose that these had developed from the spores which had been administered with the food. Although several animals perished during the author's investigations, other possible ways of infection—*e.g.* through the mucous membrane of the mouth, could not be excluded, and when the animals were fed through the stomach-sound accidental injuries might have occurred.

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* Korkanoff.—*Contribution upon the question as to the infection of the system by micro-organisms through the Intestinal Canal* (*Wratsch*, 1889, Nos. 48, 50-52) Russian; *Centralbl. für Bakteriologie*, vol. vi., No. 16, 17).

The author leaves undecided whether the experience gained from his experiments on white mice may also be predicated of other animals; since although Koch's experiments with sheep seem to point to a possible infection from the intestine in the case of anthrax-bacilli, yet Pasteur, on the other hand, obtained in similar experiments different results. Hence the author is inclined to suppose that with sheep too the conditions are similar to those with white mice. In general, therefore, he thinks that when the epithelium of the mucous membrane is intact infection of the lymph and blood-vessels is impossible from the intestine. He obtained different results with rabbits fed with the microbe of chicken cholera, since all the animals thus experimented with died with the disease, although he was not able to prove the presence of the micro-organisms in the intestinal walls through want of a good double staining method, or of a differential stain, as the microbes of chicken cholera are too easily decolorised with alcohol. According to the author's opinion, the general infection, even in these cases, is preceded by a circumscribed disease of the epithelium (necrosis), and, after the casting off of the slough, ulcerations remain through which the micro-organisms may penetrate into the circulation. It is true that one might bring forward against this view a theory that the epithelial disease was the effect and not the cause of the infection. The author believes that only those micro-organisms can produce general infection from the intestine which can destroy the protective epithelial covering of the mucous membrane. The microbes of chicken cholera belong to this class of micro-organisms. This property is *not*, however, *possessed* by the following micro-organisms: the Neapolitan bacilli of Emmerich, all normal intestinal microbes, anthrax-bacilli and their spores (at any rate in the case of guinea-pigs and white mice), staphylococcus aureus (Orloff), bacillus indicus, spores of bacillus subtilis, staphylococcus aureus (Wyssokowitsch). (*See* Art. 2,327.) With regard to the other now-known microbes, nothing is known about them in this respect, and special researches are required to demonstrate their effects upon several species of animals. VINCENT D. HARRIS, M.D.

ARTICLE 2292.

BERG ON DISEASES OF THE NASAL SINUSES, AND THE PASSAGE OF CEREBRO-SPINAL FLUID BY THE NOSE.*

THE author, Dr. John Berg, describes a case of osteoma of the nasal sinus, in which trephining and removal of 13 tumours was successfully performed. The cavity showed its greatest dilatation on the inner side, and the dura mater was exposed to a large extent. The patient recovered. During his illness of several years, on some occasions there was an abundant flow of a clear liquid from one of his nostrils, to which he attributed his headaches.

The second case, an unmarried woman, 25 years of age, who began to suffer about 10 years before from an advancing loss of sight, as well as for a year a violent headache and a sensation of weight behind the eyes, with moderate exophthalmos, diminished smell, and at intervals an abundant flow of clear yellowish fluid from the nose. The pain diminished as long as the discharge lasted. Examination showed bilateral atrophy of the optic nerves. Scarcely any visual power was left save perception of light in both eyes. No other cerebral symptoms. The roof of the naso-pharyngeal space appeared slightly depressed. The author thought that the probable cause of the disease was a hydrops of the cavity of the sphenoid bone. He trephined the cavity by piercing the inner wall of the orbit, after having removed the right eye. A yellowish fluid issued out which filled the orbit and showed evident pulsation. The headache disappeared immediately after the operation, and the patient's general condition improved. There was an abundant discharge during the first four months through the drainage-tube. The pain returned by degrees during the winter. The suspicion of the presence of an osteoma led the author to dilate for a little more than a year, the passage of the wound, as much as was necessary to allow the entrance of a finger into the sphenoidal cavity. No tumour was found. The natural cavity was not enlarged in any appreciable manner. This second operation was followed by a permanent return to health, but the sight did not return.

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* *Nordiskt Medicinskt Arkiv*, Band xx., No. 6.

The author remarks on the advantages of his method of operation over those proposed by Zuckerkandl and Schech. These were the possibility of permanent drainage, of effective irrigation and sufficient room for the removal of a tumour. The absence of pronounced enlargement of the sphenoidal sinus rendered a diagnosis of compression untenable. The attention of the author was directed to the peculiar morbid condition characterised by the abundant flow of an aqueous fluid from the nose, and to the slightly marked cerebral symptoms, of which the most constant was the bilateral atrophy of the optic nerve.

The author gives a short *résumé* of eleven cases which he has collected. He noticed the considerable differences in the chemical description of these cases, and gives an account of the more important theories which have been brought forward for their explanation, especially that of Leber. As in many of these cases the cerebral affections are not distinct, and as the appearance and chemical composition of the fluid was not always that of cerebro-spinal lymph, the author thinks that the supposition pronounced by Leber of a primary internal hydrocephalus as a cause of the disease is founded on the grounds of only a very few cases. Recalling the results furnished by the researches of Key and Retzius on the lymphatic channels of the nasal mucous surface, the author considers it most probable that the discharge is owing to an exudation or a rupture of the enlarged lymphatic channels, between the subarachnoid space and the nasal mucous membrane, rather than, as Leber thinks, to a cranio-nasal fistula due to an increased pressure of the cerebro-spinal fluid. The author sums up as follows. In several of these cases the flow from the nose of cerebro-spinal fluid has been simply owing to a communication of an abnormal enlargement of the lymph channels between the subarachnoid space and the network of the mucous membrane of the nose. The passages in the bony wall of the base of the cranium probably play an important part in these cases. It might also be supposed that the Pacchionian bodies normally found round about the cavernous sinus have gradually perforated the bone and formed the origin of the discharge. In a certain number of cases an increase of intracranial pressure has been the primary cause of an abnormal dilatation of the lymphatic communication before mentioned. This has provoked in the nasal mucous membrane a lymphatic enlargement, an exudation or a rupture. In a certain number of cases there is no reason for admitting a primary increase of the intracranial pressure. The escape of lymph in these cases depends on a disproportion between the flow of the lymph of the brain to the mucous surface of the sphenoidal or frontal sinus. We need not suppose that the cerebral symptoms which are seen in these cases and principally the bilateral atrophy of the optic nerve should depend on an increase of pressure in the skull, but they might be explained by the theory of Deutschmann, by the supposition that the inflammatory matters of the stagnant lymphatic currents in a frontal or sphenoidal sinus penetrate into the subdural and subarachnoid spaces and their ramifications which accompany the length of optic and olfactory nerves.

W. W. IRELAND, M.D.

GENITO-URINARY SURGERY.

RECENT PAPERS.

2293. RENVERS.—On Gastric Crises and Intermittent Hydronephrosis. (*Berliner klin. Wochensch.*, Dec. 31, 1888.)

2294. TIZZONI AND POGGI.—Removal of the Bladder and Formation of a New One. (*Congress of the Italian Society of Surgeons*, held at Bologna, April 1889.)

2295. BROHL.—Excision of the Bladder. (*Wien. med. Presse*, 1889, Nos. 27 and 28.)

2296. TRICOMI (of Rome).—On Absorbent Power of the Bladder. (*Congress of Italian Society of Surgeons.*)

2297. CHAPUT.—Nephrectomy for Traumatic Rupture of the Ureter and Colon. (*Société de Chirurgie*, March 13; *Annales*, July 1889.)

2298. LANGENBUCH.—On Operation for Floating Kidney and Floating Liver. (*Deutsche med. Wochensch.*, 1889, p. 325.)

2299. HAGER.—On the Error of Nephrectomy for Floating Kidney when Healthy. (*Berlin. klin. Woch.*, 1889, No. 2.)

2300. DELEFOSSE.—On Urethrotomy accompanied with Retrograde Catheterism. (*Annales des Maladies des Organes Génito-urinaires*, September 1889.)

2301. GUYON.—On a New Form of Instrument for Withdrawing Thin Bougies, &c., from the Bladder. (*Ibid.*, September 1889.)

2302. EBSTEIN AND NICOLAIER.—On the Artificial Production of Urinary Calculi. (*Centralbl. für Chir.*, July 1889.)

2303. POIRIER.—On Catheterism of the Ureters. *Annales des Maladies des Organes Génito-urinaires*, (September 1889. *Report of the Académie des Sciences.*)

2304. ANDREWS, DR.—On the Comparative results of Lithotomy, Litholapaxy, and Lithotrity in One Hundred Operations for Stone. (*Journal of American Medical Association*, June 15, 1889.)

2305. HICKMAN.—On the Treatment of Urethral Stricture by Electrolysis. (*Kansas Med. Record*, May 1889.)

2306. THOMPSON.—A Case of Urethral Polypus. (*Illustrated Med. News*, October 1889, p. 53.)

ART. 2293. *Renvers on Gastric Crises and Intermittent Hydronephrosis.*—Dr. Renvers brought forward a case at a meeting of the Society of the

Charité Aerzte in Berlin, where the patient, a baker, aged 28, of good muscular physique and well nourished, suffered from severe gastric crises. There was no history of neurosis in the family, but after a violent chill two years before he had cramp in the stomach extending to the left hypogastric region, and lasting for several hours. In this attack there was violent vomiting and diarrhœa, which lasted three days. After several months' pause similar attacks of pain returned, and it was suspected that the cramps were connected with external hæmorrhoids, since operation on these relieved the attacks. He came into hospital and was under observation. The attack commenced with slight shivering, lasting about an hour, without any rise of temperature. Then came on tenesmus and squeamishness, and the patient generally induced vomiting. There was a dragging pain in the left epigastric region, general profuse sweating, and the pains increased to such an extent that he groaned aloud, threw himself about on the bed, drew his legs up to the body, and clenched his hands. The pulse rose to 140 and the costal breathing to 40, but the temperature remained normal. The patient drank largely of water, and the attack ended with vomiting, produced by the patient artificially. It was followed by deep sleep for several hours, and recovery in a few days. The viscera and sense organs were carefully examined without finding any cause for the complaint. After a few weeks it was noticed that during the attacks a large tumour occurred in the left epigastric region, movable, fluctuating, and evidently connected with the left kidney. When examined some hours after the end of an attack of pain the tumour had disappeared. Only once did the urine (after an attack) contain a small quantity of blood, but this may have been produced by frequent manipulation of the tumour. The swelling was subsequently punctured and the urinous fluid evacuated. The discussion of the author in his paper was with reference to treatment rather than cause, but it was argued that such cases were liable to be mistaken for incipient tabes, inasmuch as in those cases similar gastric crises occur, and in the present instance there was little or nothing to point to the existence of hydronephrosis until quite late in the observations. [No record is given of any excessive flow of urine at the end of an attack, as frequently occurs. Otherwise we do not see that the case differs materially from what has been already recorded in such cases. The absence of evidence of tumour may have been due to imperfect distension in the first place or to oversight in the observer.—*Rep.*]

2294. *Tizzoni and Poggi on the Removal of the Bladder and Formation of a New One.*—In the *Annales des Maladies des Organes Génito-urinaires* for July 1889, mention is made of the experiments of Tizzoni and Poggi on removal and reformation of the bladder. The bladder was completely removed from a dog, and a new one afterwards formed at the expense of the intestine. The ureters were made to open into this, and the urethra also. The animal recovered, and its performance of urinary functions was perfect. [The account given in this journal is too meagre to be of much service, but the fact is fully worth noting. Some interesting observations have already been recorded by Pousson, Gluck, Skamenski, &c., and notified in the London Medical Record (1885, p. 173), and some suggestions for the best method of diverting the ureters in man were recently made by Ballance and Edmunds in the *St. Thomas's Hospital Reports*, vol. xvi., and noticed in the London Medical Recorder, March 20, 1888, Art. 198.]

2295. *Brohl on Excision of the Bladder.*—The important observations of Gluck and Zeller in Langenbeck's *Archives*, 1881, of Fischer (*ibid.*, vol. xxvii.), and Skamensky (*ibid.*, vol. xxxi.), were followed by operations on the human subject by Sonnenburg for fibrosarcoma of the anterior wall, by Ental for tumour, and by Schartz for tubercle. The last two surgeons were successful, but up to the present time no one has removed the whole bladder, or even the whole mucous surface. Brohl now publishes four cases. The first, in which death occurred in a fortnight, seems to have been an almost entire removal of the bladder. But the description of the operation is not full, and it is not said what was done with the ureters. The other three cases were dissection and removal of the mucous membrane (one for tubercle and two for diffuse new growth), and in each case the bladder was exposed freely by section of the symphysis after Bardonheur's plan and the mucous membrane dissected off, and the patients recovered. [The difficulty of dealing with the ureters is of the greatest practical importance, and has given rise to suggestions we have already noticed in these pages—*see* Ballance and Edmunds, London Medical Recorder, March 20, 1888, Art. 198. The actual removal of the bladder or its mucous surface has been already proved possible in animals, but these cases reported by Brohl seem to be of great value, though partial removal of the bladder and its mucous surface in the human subject has already been recorded. *See* also Tizzoni and Poggi above.—*Rep.*]

2296. *Tricomi on Absorbent Power of the Bladder.* Dr. Tricomi maintains that in a bladder where the mucous surface is healthy, absorption takes place readily in hypodermic injection with strychnine, prussic acid, chloroform, and sulphuretted hydrogen, but it is less rapid with cantharidine, corrosive sublimate, carbolic acid, morphia, and cocaine Where the epithelium is altered absorption is not altered in the case of the first-named class of medicines, while the second-named class is absorbed even more slowly than in the healthy bladder, and the injection of micro-organisms was followed by toxic effects very readily. Finally, where suppuration is going on in the bladder absorption of gaseous substances is rapid.

2297. *Chaput on Nephrectomy for Traumatic Rupture of the Ureters and Colon.*—A boy of 16 was kicked in the right loin by a horse, and when taken to the hospital two days afterwards there was found a large painful tumour of the right lumbar region. The next day the tumour diminished in size, but a new swelling occurred in the iliac fossa, and this gradually filled the whole space of the false pelvis. M. Chaput punctured this, and let out some reddish fluid, suggesting a sero-sanguinolent tumour as the result of the injury. He therefore made an incision as if for ligature of the internal iliac, attempted to raise the peritoneum, but this tore away and exposed a tumour as large as a child's head. When this tumour was opened there escaped a reddish fluid mixed with fæcal matter. This was in fact within the cæcum. When this was emptied it could be seen to refill from a perforation in its posterior wall. This perforation was sutured at the same time as the wound of the operation, and on then examining the tumour behind the ascending colon it was found to contain a washhand basin full of reddish fluid, having all the characters of urine. It was made out then that there was a rupture of the ureter, with escape into the intestine by an orifice made at the time of the accident. The abdomen was closed after cleaning out the cavity. The patient recovered from the operation, but a urinary and fæcal fistula remained in the wound. To remedy this M. Chaput performed nephrectomy on the right side without difficulty, and soon after both fistulæ closed. [This interesting case would be better for fuller details, and the advisability of nephrectomy does not appear conclusive.—*Rep.*]

2298. *Langenbuch on Operation or Floating Kidney and Floating Liver.*—A girl of 19 was operated on for nephrorraphy on the right side by Langenbuch, and the troublesome symptoms ceased until she fell, six months afterwards, when they reappeared, and were supposed to be due to the kidney having become displaced afresh by the fall. Langenbuch incised through the old wound and found the kidney perfectly fixed, but then discovered that the floating tumour was really the loosely-connected right lobe of the liver. Healing took place by second intention, and the liver remained fixed. The patient subsequently married, became pregnant, and aborted at two months, and the symptoms reappeared. Langenbuch was convinced by examination that the liver was floating, and recommended the use of a special abdominal support. The same author records a fatal case of nephrorraphy in a woman of 43 where there was an abdominal tumour diagnosed, and proved to be dropsy of the gall-bladder. She had for some years suffered from hepatic colic, and had passed biliary calculi by the kidneys. An abdominal incision was made, the diagnosis verified, lumbar nephrorraphy performed, and she died of septicæmia in three days. Langenbuch explained the suppuration in the wound by the fact that one of the sutures traversed an old embolic infarction.

2299. *Hager on the Error of Nephrectomy for Floating Kidney when Healthy.*—Hager argues against nephrectomy for healthy floating kidney, and narrates a case in which Wiesinger, of Hamburg, had operated on a woman of 22 for floating kidney, with troublesome symptoms of a year's duration, following a blow on the right side. The patient recovered, though a sharp hæmorrhage occurred on the night following the operation. But soon appeared serious painful symptoms, due to a lithiasis of the left kidney, which became displaced in its turn, and for this Kumrach performed nephrorraphy. The patient improved, but soon a further uræmic condition appeared, and Hager considered she would ultimately succumb to this malady.

2300. *Delefosse on Urethrotomy accompanied with Retrograde Catheterism.*—Dr. Delefosse describes the method he adopts in certain cases. Having opened the bladder by the hypogastric incision, he feels for the vesical orifice of the urethra with the left index finger, and passes a bougie as far as the perineal or penile wound, when it is attached to the end of the instrument passed from the meatus. The conclusions at which he arrives are that—1, hypogastric cystotomy is a necessary preliminary; 2, retrograde catheterism should be adopted more frequently than hitherto in cases of impassable stricture, and should be combined with external urethrotomy; 3, retrograde catheterism can be employed (but less frequently) for ruptured urethra; 4, it should be very rarely adopted in cases of enlarged prostate or where false passages are the cause of the retention; 5, it appears preferable to perform external urethrotomy and retrograde catheterism at the same sitting; 6, retrograde catheterism is a most important therapeutic resource, which deserves attention from surgeons.

2301. *Guyon on a New Form of Instrument for Withdrawing Thin Bougies, &c., from the Bladder.* Professor Guyon draws attention to an ingenious sort of crochet hook guarded in the bulbous end of an olivary bougie. This passes easily into the bladder and would catch any cord-like foreign body without difficulty.

2302. *Ebstein and Nicolaier on the Artificial Production of Urinary Calculi.*—The results of certain experiments by these observers were presented at the Congress of German surgeons, and are interesting. Dogs were fed with oxamide, an ammoniacal derivative of oxalic acid, and as a result large calculi were formed in the pelvis of the kidneys, and small calculi of a dark colour in all parts of the urinary system. The largest had a rough warty surface, were of a pale yellowish grey colour, and laminated from the intermingling of some albuminous substance. [This form of lamination in the presence of a colloid deserves further notice in the light of the observations of Ord, Ranney, Vandyke Carter, and others, but the authors have evidently been most interested in the important question of the relation of calculus to the chemical constituents of the food.—*Rep.*]

2303. *Poirier on Catheterism of the Ureters.*—Seeing the importance of determining whether one kidney is really healthy when operation is to be undertaken on a presumably unhealthy one, M. Poirier has tried to pass a catheter into the vesical orifice of the ureter and draw off the urine coming down that side. He used Nitze's electric cystoscope and that of Boisseau du Rocher, which he maintains gives a larger field of view. After a few minutes he declares that he has always been able to pass a catheter quite easily into the ureter, the catheter being specially made. The difficulties which the cystoscope meets in the case of tumours of the bladder do not occur, he says, in the catheterism of the ureters. The operation is one of the easiest. The orifice is easily found, and with a small catheter passed along a special canal in the cystoscope enters the ureter easily. During the last month he has catheterised the ureters of two patients very easily, and some of his assistants have successfully repeated the operation. The instrument of M. Poirier is urged to have the advantage of dilating the lower end of the ureter and so facilitating the passage of calculi. [Tuchmann has invented a means of obtaining the urine direct from either kidney, and Mr. Fenwick a ureter aspirator, but the latter author, in his recent work on 'Electric Illumination of the Bladder' (p. 199), says, 'the plan of introducing a catheter into the male urethral orifice under electric light is not yet within the range of practical surgery.' M. Poirier makes the process appear so easy that one accepts the account with some hesitation, and only hopes it may prove a possibility, as it would be a positive advance in the means of diagnosis.—*Rep.*]

2304. *Andrews on the Comparative Results of Lithotomy, Litholapaxy, and Lithotrity in One Hundred Operations for Stone.*—The professor of clinical surgery at Chicago concludes strongly in favour of litholapaxy. Of the hundred operations for stone which he has had he reports fifty-five times by cutting, with seven deaths; six times by the old style of lithotrity of Civiale and of Sir Henry Thompson, with one death; and forty times by Bigelow's litholapaxy, with one death. The following is a summary of the cases:—*Summary.*—Total number of cases of lithotomy, 55; deaths, 7; mortality 13 per cent. Lithotomy below age of puberty, cases, 26; deaths, 2; mortality 8 per cent. Lithotomy above age of puberty, cases, 29; deaths, 5; mortality 17 per cent. Lithotrity after the manner of Sir Henry Thompson, cases, 6; deaths, 1; mortality 17 per cent. Litholapaxy after the manner of Prof. Bigelow, cases, 40; deaths, 1; mortality 2·5 per cent. Of the 101 operations above tabulated, two only were upon females. It will be observed that the total number of operations in the tables is 101, instead of 100. This is in consequence of including one litholapaxy in addition to those performed with his own hands, which was done on a hospital patient by his colleague in his temporary absence. The increase of safety by the introduction of litholapaxy is immense, and, in his opinion, almost all adult operations for stone in the bladder should be done by this method. The following classes of cases still require the cutting operation:—1. All children whose urethræ are too small to admit small-sized lithotrites. 2. All cases where the stone is too large to be grasped by the instrument. Case 14,714 was of this character. Having a diameter of 9 centimètres, the jaws of the instrument could not grasp it, and he was obliged to proceed by suprapubic lithotomy. The peculiarities of this case give it special interest. It turned out that there was a thick mass of connective tissue indurated by inflammation between the bladder and the upper border of the pubis. He first introduced into the bladder the French instrument called the *sonde à dard*, in order to use it as a guide to the suprapubic incision. It is made like a strong silver catheter, but carries in its canal a curved steel dart or stiletto with a groove on its surface. The operator inserts it into the bladder and, pressing the tip against the front of the viscus, pushes the dart forward till it pierces the tissues and appears in the bottom of the primary incision. The bistoury is then entered into the groove and guided by it into the bladder. In this case the dart would not pierce the tough mass of tissue, and he was obliged to go in with the scalpel alone. He finally found the cavity with the stone in it, well back against the rectum, after a dissection of alarming depth, and then extracted the immense calculus without further difficulty. 3. In a few cases mulberry calculi are so hard that they cannot be crushed without breaking the lithotrite. He reports one such case where, failing to exert sufficient strength alone, he got the assistance of another surgeon and exerting now their full force a metallic click from within the bladder told that the instrument was broken. The shank of the female blade was cracked half across and distorted enough to prevent closing the jaws again. Here was a dilemma. The instrument could not be drawn out unless closed, and for a time it was probable that it would be necessary to incise freely upwards through the perinæum, pry the open jaws of the instrument downward through the incision and file off the shank. However, he succeeded after a time in slipping the blades past the hitch and closing the jaws. He then withdrew the lithotrite, and proceeded at once to remove the stone by lateral lithotomy. The patient recovered, but it was proved that two strong men are too much for one lithotrite. He thinks it probable, also, that a stone might sometimes be found accreted around some smooth piece of steel or iron previously slipped into the urethra by the patient and lost in the bladder. The calculous mass could easily be crushed loose from the steel, but unless the surgeon could succeed in seizing the latter by the end, he could not withdraw it, and might possibly have to cut for it. Two or three times he found stones containing rolls of chewing gum for nuclei. The gum is slightly pasty, but it breaks into pieces small enough to come readily out through the tubes. He judges that we ought to have a lithotrite a little thicker and stronger than any now made to apply to unusually hard stones. 4. Deformities of the bladder sometimes render it impossible to seize a stone. The deformity may consist of a sacculus too deep to be explored by the jaws, or a stone may be hid behind a prominence of the prostate, so that a lithotrite cannot reach it. He was once called in council by a skilful surgeon who, in attempting lithotomy, found this difficulty to such an extent that, though he had already cut the patient, he could not seize the stone with his lithotomy forceps, because they happened to be straight. His own forceps, which are curved, seized it without much difficulty. 5. Strictures of the urethra forbid litholapaxy, unless they are first overcome. Case 14,841 had this obstruction. It was first divided by Maisonneuve's stricture cutter, and the litholapaxy successfully performed about a week later. These various obstacles to litholapaxy are rarely insuperable in adults, so that out of forty-two proposed operations of this sort, only two had to be changed to lithotomy; yet these two are enough to show that a surgeon should always go to a case prepared for either operation. Case 8,497 (lithotomy) was remarkable for containing nine stones, of which six were of large size and accurately fitted to each other by attrition. Their combined weight was 176 grammes. Professor Bigelow's main improvements are thoroughly established, at least until something better can be devised; yet, excellent as it is, litholapaxy in its present form has certain objectionable features which are common to all efforts to evacuate the crushed fragments by a to-and-fro current. The bulb of his apparatus is first compressed, driving some water into the bladder, and then allowed to expand and draw it out again. This expansion draws a stream of fragments with it, some of which reach the bulb; but, as the suction lasts only during the instant of the bulb's expansion, the current ceases and stops a long row of fragments in the tube, only to drive them swiftly back into the bladder at the next compression. By this churning to and fro many sharp-angled pieces are alternately drawn out of the bladder and shot back into it scores of times before they finally escape into the bulb, thus irritating the bladder by the pelting of sharp fragments, and by the constant and prolonged repetition of forced distensions. Evidently we need, not a churning to and fro, but a continuous current, always in one direction, but, as the outflow tube must be large, to allow the pieces to pass it, one would judge at first thought that there would be no room for a sufficient inflow tube by the side of it.

2305. *Hickman on the Treatment of Urethral Stricture by Electrolysis.*—There does not appear to be much that is new in this article, but it represents the views held by an American surgeon on this form of treatment. He says in conclusion the points essential to be remembered are: 1st. The pathological sequence instrumental in the formation. 2nd. The treatment in conformity therewith. 3rd. The qualities of the current as already pointed out, viz., a stimulant, but never an irritant. The length of each sitting and of the intervals between the strength of current, size of electrode, and placing of poles on these have already been considered, except the last two. The size should be small enough to be readily introduced, yet large enough to come in contact. In placing of poles he has usually followed the teaching of Newman and others, but in accordance with the view he takes, it probably is an important matter. Finally, he reviews what he has laboured to point out in this paper. 1st. That the exudations, infiltrations, or by what term we choose to designate, which stand in the relation of cause to strictures, remain for a long period in a state of subacute or chronic inflammation. The products of such inflammation remain and are not absorbed for two reasons: First, because all efforts in this direction are constantly being counteracted by the mucous surface being subjected to continual irritation of urine passing over it, and secondly, this continued irritation greatly exhausts the activity. 2nd. That any treatment to be effective must be of a twofold nature or action; a local sedative, and local stimulant, and that especial care must be exercised not to push the latter quality beyond and cause it to become an irritant. 3rd. That in electrolysis we have one remedy which possesses these best qualities in an eminent degree. It allays superficial irritation, and by its stimulant qualities enforces a deficient vitality — that is, possesses two qualities above all others, its variable strength and penetrating action. 4th. That this action is truly that of a stimulant and sedative, nothing more and nothing less, and that its use in these cases must be based upon that principle alone.

W. W. WAGSTAFFE.

2306. *Thompson on a Case of Urethral Polypus.*—In the *Illustrated Med. News*, October 1889, p. 53, a case is reported by Dr. Thompson of a lad, aged 16, who was admitted into the hospital on March 23, 1888, with the following condition. The penis was enlarged, and nearly the whole of the pendulous portion was as hard as cartilage. There was great induration of the prepuce, and projecting from the meatus by a broad base was a warty excrescence as large as the glans penis. The lower part of the urethra for one and a half inches was absolutely occluded, and no mucous membrane could be seen. At the root of the penis and in the scrotum were urinary fistulæ, and *per anum* a valve-like opening could be felt, through which all the urine was passed, but it opened into the prostatic urethra, and not into the bladder, as the boy had perfect control over micturition. The previous history was that six or seven years previously he began to experience difficulty in micturition. and a 'hard lump' was noticed in the substance of the penis, about one and a half inches from the meatus, which gradually extended towards the meatus, and after a time protruded therefrom; shortly after this urinary fistulæ formed in the penis, and in September 1887 he first began to pass urine *per anum*. The author at first thought the growth was malignant, but the long history was against this. On April 4 he slit up the prepuce, then made an incision along what ought to have been the urethra, until he got past the growth and into normal urethra. The growth was then cut away, and the incision was stitched up round a catheter by a double row of sutures, one connecting the new urethra only, and the other the skin, leaving the catheter tied in, after a circumcision had been completed. To the distal end of the catheter a long India-rubber tube was attached, the lower end of which was immersed in a solution of carbolic acid. The incision healed well and perfectly, but on May 5, 8, and 9 he had severe rigors and became dangerously ill, so that on May 12 he was placed under chloroform, and an opening was made in the perinæum, on a grooved director passed into the urethra, through which a soft catheter was passed into the bladder, and tied in. He rapidly improved, and on July 26 was so far recovered that a Holt's dilator was passed in from the meatus, and the urethra gently dilated. No bad symptoms followed, and on Aug. 14 he was discharged as an out-patient. He came, however, once a week to have a silver catheter passed, and now he attends once a month, when a No. 12 silver catheter is passed without difficulty. All the fistulæ had healed except one in the perinæum, though the remains of the prepuce are still much thickened, and the penis has not a very presentable appearance.

RICHARD NEALE, M.D.

THERAPEUTICS.

RECENT PAPERS.

2307. CADIER, DR.—On Primary Laryngeal Tuberculosis Acquired by Cohabitation. (*Rev. Gén. de Clin. et de Thérap.*, Oct. 17, 1889.)

2308. BLANQUINQUE, DR. — On the Treatment of Facial Furunculus by Tincture of Iodine. (*Rev. Gén. de Clin. et de Thérap.*, Nov. 14, 1889.)

2309. ANTIQ, DR.—On the Treatment of Chlorosis by Rectal Injections of Defibrinated Blood. (*Rev. Gén. de Clin. et de Thérap.*, Nov. 14, 1889.)

2310. HEPP, DR.—On the Therapeutical Effects of Methylacetanilide (Exalgine). (*Rev. Gén. de Thérap.*, Oct. 30, 1889.)

2311. DUJARDIN-BEAUMETZ AND BARDET, DRS.—On Exalgine. (*Rev. Gén. de Thérap.*, Oct. 30, 1889.)

2312. CHAUVET, DR.—On Matutinal Diarrhœa. (*Rev. de Thérap.*, Oct. 15, 1889.)

2313. PETRESCO, PROFESSOR.—On the Emetic Action of Apomorphine. (*Rev. Gén. de Thérap.*, Oct. 30, 1889.)

ART. 2307. *Cadier on Primary Laryngeal Tuberculosis Acquired by Cohabitation.*—After mentioning the symptoms and signs of this affection, the author observes that during the period of invasion, auscultatory signs are almost uniformly wanting, apical signs having been detected in only one out of forty cases coming under observation. Later on, ulceration takes place in the larynx, and then, in about half the cases, slight and more or less fugitive pulmonary symptoms may be detected. This form of laryngeal phthisis differs from the secondary affection in that the lesions, in the former, are less conspicuous on the cords than in the superior division of the larynx, consequently local treatment is easier and more efficacious. In most cases the first symptoms of the affection do not declare themselves in the second *conjoint* until the first sufferer is at an advanced stage of the disease (43 in 70). In 5 cases out of 70 the first symptoms only manifested themselves in the second, when the first sufferer had only localised moist râles. In the remaining 22 of the 70 cases the symptoms did not supervene until a variable time after the death of the *conjoint* first attacked; in certain instances, not until a year later. The transmission of this redoubtable affection having been conclusively proved, in a large number of cases, to have taken place as a consequence of cohabitation, the first element of the treatment is to isolate the sufferer, by insisting on separate beds or, preferably, separate bedrooms. Simple as is this precaution, it is by no means easy to get carried out, for obvious reasons. On account of the localisation of the disease in the upper part of the larynx—localisation which is very persistent in acquired laryngeal tuberculosis—the local treatment is of the greatest importance. This consists of cauterisation or topical applications, sprays, and fumigations. The author failed to obtain satisfactory results from 'creasoted glycerine,' lactic acid, and the remedies usually employed, and in most cases after the creasoted glycerine, he applied a solution of morphine, codeine, or cocaine in glycerine. Latterly he has used a solution (1 in 20 or 30) of creasote in liquid vaseline, gradually increasing the strength to 1 in 8 and even 1 in 6. When unable to make himself at least two applications a week, he directs patients to use themselves, every second day, a steam spray containing a spoonful of the following solution: ℞ creasoti, 1 gramme; spi. vini rect., 25 grammes; cocainæ mur., 20 centigrammes; glycerini, 10 grammes; aquæ dest., 160 grammes. The vapour is to be used, preferably on retiring to rest, for three or four minutes. He also orders a spray with the same apparatus, every morning, containing: ℞ zinci chlor., 80 centigrammes; morph. hydrochlor., 20 centigrammes; glycerini, 10 grammes; aquæ dest., 190 grammes. When the cough is dry, spasmodic, and frequent, he replaces the latter by: ℞ sodii brom., 3 grammes; cocainæ hydrochlor., 30 centigrammes; glycerini, 10 grammes; aquæ dest., 190 grammes; to which, in cases of laryngeal congestion, he adds a few drops of tincture of aconite or of hamamelis virginica. When there is paresis and asynergy of the vocal cords he substitutes a few drops of nux vomica for the bromide.

2308. *Blanquinque on the Treatment of Facial Furunculus by Tincture of Iodine.*—The author relates several severe cases of anthrax of the face (lips) treated simply by means of the application of tincture of iodine repeated thrice daily. He recalls the fact that furunculus and anthrax of the lips are of exceptional gravity on account of the richness of the vascular supply of these parts, and they may occasionally even lead to fatal complications. The only precaution required is to scrape off the little crust or scab which obstructs the entrance to the diseased follicles. In severe cases it may be desirable to inject the tincture of iodine hypodermically.

2309. *Antiq on the Treatment of Chlorosis by Rectal Injections of Defibrinated Blood.*—In a thesis maintained by the author before the Faculty of Medicine of Lyons, he relates the results obtained by a novel method of treating chlorosis suggested long since by Teissier. The material employed is the blood of oxen, duly defibrinated. About 5 oz. of this is injected *per rectum* twice a day for a week. The treatment is discontinued at the end of that period for a week, and then recommenced. Care should be taken to warm the blood over a water-bath before injecting, and the patient should be directed to retain it as long as possible, any colicky symptoms being overcome by the addition of a few drops of laudanum. According to the author, this treatment is more rapidly and certainly successful than any other at present resorted to. The proportion of red corpuscles in the blood promptly increases, and the mucous surfaces regain their normal colour. He attributes the rapid improvement that takes place to the fact that the employment of defibrinated blood fulfils three indications—(1) restitution of the iron; (2) restitution of oxygen; and (3) restitution of the salts of potash and the chlorides. Dr. Huchard, commenting thereupon, mentions that, in a case of his own, he had succeeded in overcoming an anæmia which had resisted all medication.

2310. *Hepp on the Therapeutical Effects of Methylacetanilide (Exalgine).*—The author claims to have first experimented with methylacetanilide (exalgine) in 1887, and the conclusion he then arrived at was that it is a poisonous drug, to be used with caution. Having determined by experiments on animals that it possessed antipyretic properties, he administered five grains of the drug to a phthisical patient with febrile symptoms, which had yielded readily to five grains of antifebrin. The first dose of five grains not having brought down the temperature at the expiration of two hours, a second dose of the same amount was given. Within half an hour of the second dose the patient complained of giddiness, and suddenly became unconscious, this condition being associated with convulsive movements of the limbs. These disquieting symptoms ultimately disappeared, without leaving any trace, after having, however, recurred twice more within half an hour. Under these circumstances he declined to try the drug again for obvious reasons.

2311. *Dujardin-Beaumetz and Bardet on Exalgine.*—In reply to the preceding article the authors admit the priority of M. Hepp's experiment on exalgine, or, as it is scientifically designated, methylacetanilide; but they point out that while M. Hepp's researches bore on its antipyretic, theirs dealt with its analgesic, properties. While admitting that exalgine is a drug producing marked physiological effects, they point out that this is no contra-indication to its use, otherwise such powerful drugs as opium, arsenic, &c., would have to be banished from the therapeutical arsenal. They call attention to their previous statement that fever is a contra-indication to the use of exalgine. They have administered it for the sake of its analgesic properties to hundreds of patients suffering from neuralgia always with the most satisfactory results, and without ever having had to remark cyanosis, or indeed any disquieting symptom whatsoever—a fact which they attribute to their never having exceeded 10-grain doses, and to their abstention from using it in febrile cases.

2312. *Chauvet on Matutinal Diarrhœa.*—The author alludes to cases in which the patient complains that every morning he is suddenly seized with an imperious desire to defæcate, followed by the passage of one or two diarrhœic motions. These diarrhœic stools usually take place on getting out of bed, but in some cases the desire is experienced before leaving the bed, though in every instance it is consequent on a movement of some kind. There is no pain nor tenesmus, the stools may be quite liquid and abundant, and often very offensive. The number of stools rarely exceeds two, but has been known to go to four. The abdomen is tender on pressure, the appetite is usually good, sometimes in excess; thirst is constant and marked, and on succussion the splashing sound of gastric dilatation may be heard. The general health is not, as a rule, affected. Observation has shown that the kind of food ingested, and particularly the quantity of drink taken, are of considerable importance. These patients digest with difficulty, vegetables, raw fruit, meat dished up with sauces, and stews. Moreover, they all consume large quantities of liquids. The treatment consists in forbidding them to drink between meals, and in not exceeding a pint and a half of liquid in the 24 hours. The solid food should comprise roasted or grilled meats, mashed (powdered) vegetables, and well-cooked fruits. The evening meal should be light, and, if possible, no liquid of any kind taken thereat. In almost every case this treatment has caused the matutinal diarrhœa to disappear, and in the course of a week or ten days the patients have regained a normal habit. In some, however, it was found necessary to supplement this treatment by frictions, hydrotherapy, and sinapisms to the abdomen and in the lumbar region. If the stools are offensive, naphthol, associated with salicylate of bismuth, or iodoform, should be given.

2313. *Petresco on the Emetic Action of Apomorphine.*—The author reports a series of observations bearing on the effects of apomorphine as an emetic in doses of from 6 to 17 milligrammes ($\frac{1}{11}$ to $\frac{1}{4}$ grain). In doses of 6 milligrammes ($\frac{1}{11}$ grain), administered subcutaneously, only one of four patients had nausea and vomiting. Subsequent experiments with the same dose gave rise to similarly incomplete results, from which he concluded that the dose was insufficient. He then injected 7 milligrammes, which gave rise within five minutes to profuse perspiration, nausea, and vomiting, lasting about a quarter of an hour. Doses of 15 milligrammes and above, in addition to nausea and vomiting, caused marked prostration, and had a tranquillising effect on the circulation, reducing the pulse-rate 24 per minute, and causing dilatation of the pupil. None of the effects, however, lasted longer than twenty minutes.

Alfred S. Gubb.

OTOLOGY.

RECENT PAPERS.

2314. May, Charles H.—A *Résumé* of Experience at the Aural Clinic of Professor Hermann Schwartze, in Halle, Germany. (*New York Medical Journal*, May 25, 1889.)

2315. Thorner, Max.—A Case of Persistent Tinnitus Aurium Relieved by the Removal of a Nasal Obstruction. (*The Cincinnati Lancet-Clinic*, May 18, 1889.)

2316. Kiesselbach, Professor.—On the Action of Hydrochlorate of Cocaine on the Ear. Preliminary Communication. (*Monatsschrift für Ohrenheilk.*, September 1889.)

2317. Patrzek, Dr.—On a Source of Error in Testing with the Tuning-fork. (*Monatsschrift für Ohrenheilk.*, October 1889.)

2318. Herzog, Joseph.—Contribution to the Theory of Aural Reflexes Produced by a Collection of Cerumen in the External Meatus. (*Monatsschrift für Ohrenheilk.*, May 1889.)

2319. Stewart.—On Boxing the Ears and its Results. (*Illustrated Med. News*, October 1889, p. 76.)

Art. 2314.—*Schwartze's Treatment of Ear Diseases.*—In a paper in the *New York Medical Journal*, May 25, 1889, Dr. C. H. May gives a brief account of the methods of treatment adopted at Professor Schwartze's clinic at Halle. The treatment of otitis med. purulenta chronica by dry powders is condemned, and considered dangerous as likely to produce mastoid disease. Chronic purulent inflammation with perforation is treated by washing out the tympanum by the injection through the catheter of a warm solution of purified common salt (strength $\frac{3}{4}$ per cent.). In otitis media chronica catarrhalis, when other methods fail, paracentesis is performed, and salt solution injected through the tube and middle ear as in the purulent cases, the greatest care being taken to dry the ear thoroughly in order to prevent suppuration. Adenoid vegetations are removed by Trautmann's spoon or Meyer's ring knife. It is needless to give details of Schwartze's method of opening the mastoid (with chisels), but it is interesting to learn that recently in upwards of eighty cases he has only had two deaths, one of which was independent of the results of the operation.

2315. *Thorner on the Relief of Tinnitus Aurium by the Removal of a Nasal Obstruction.*—Dr. Thorner (the *Cincinnati Lancet-Clinic*, May 18, 1889) relates the case of a gentleman with chronic non-purulent middle-ear disease, and hissing and buzzing tinnitus of five years' duration, chiefly affecting the right ear. The right nostril was entirely obstructed by a webfoot-like membrane, which closed more than three-quarters of the upper and lateral part of the entrance to the nose; the remainder of the opening was completely occluded by a portion of the deviated septum. The introduction of a catheter through the right nostril was impossible, and treatment by politzerisation, &c., for five months failed to relieve the buzzing noise in the right ear. The patient at last consented to the removal of the obstruction, which was found to be a hard, partially cartilaginous structure of considerable thickness. The septum was also straightened, and a cartilaginous spur removed. Although only four inflations of the right ear by means of the catheter were made, the patient returned seven months after and reported that the intensity of the noise in the right ear had been gradually but steadily decreasing, so that he was only occasionally annoyed, and even then nothing compared to the former trouble. The hearing had remained the same.

2316. *Kiesselbach on the Action of Hydrochlorate of Cocaine on the Ear.*—Professor Kiesselbach, in a preliminary communication on this subject (*Monatsschrift für Ohrenheilk.*, September 1889), has tried injections *per tubam* of five to ten drops of a warm solution of this salt (four to ten per cent.) in cases of tinnitus aurium. In some cases the first injections were followed by giddiness, and occasionally vomiting from a quarter to half an hour after the application. At times the noises were increased for a day or two, to become afterwards considerably less than they originally were. In fresh cases the author reports that the noises often ceased after the first injection. In chronic cases the method is said in some cases to have produced not only diminution of the noises, but to have relieved the symptom of vertigo. The explanation is, according to the author, to be sought in the fact that moderate doses of cocaine diminish the arterial pressure.

2317. *Patrzek on a Source of Error in Testing with the Tuning-fork.*—The author (*Monatsschrift für Ohrenheilk.*, October 1889) draws attention to the importance in reporting the results of examination with the tuning-fork, of stating whether the instrument is firmly pressed on the head or merely touches the skin lightly.

2318. *Herzog on Aural Reflexes produced by Accumulation of Cerumen.*—Dr. Joseph Herzog (*Monatsschrift für Ohrenheilk.*, May 1889), relates the case of a lady suffering from bicuspid insufficiency, who, by the removal of a plug of wax from the ear, was relieved of a feeling of drawing in the neck and head, constriction of the head, giddiness, palpitation, an indescribable sensation of fear, and melancholia. The hearing was said to be good, and there was no tinnitus. The relief was immediate, and there was no return six months after.

E. Cresswell Baber, M.B.

2319. *Stewart on Boxing the Ears and its Results.*—In the *Illustrated Med. News*, October 1889, p. 76, Mr. Stewart draws attention to the very serious results sometimes produced by boxing the ears of children, especially in scrofulous, half-starved children of the lower classes. The author states that rupture of the drum-head from this cause is much more common than is generally supposed. A child is brought to the hospital because there is a 'running from the ear,' and often, on making strict inquiries, one is able to trace the beginning of the attack to a blow. In the case of a strong healthy child, should the membrane be broken from this cause, it frequently heals at once, with little or no pain; or the pain may last for a short time and no notice is taken of it, though some loss of hearing power may exist, and the seeds are sown of future ear mischief. When the ears are boxed, the concussion forces the drum-head suddenly backwards, and at times rupture will occur, especially when the blow takes the recipient unawares. When a rent is thus produced, a more or less acute inflammation of the drum-head sets in, causing pain, which at times is most severe. This inflammation may cure itself without treatment, but it is almost sure to be cured with prompt and proper attention. On the other hand, if neglected, the inflammation may spread to the tympanic cavity, and a chronic suppuration with deafness ensues, leading even to fatal results. Thus, adhesive bands may be thrown across the tympanum, tightly binding down the membrane; mastoid disease may be set up, caries and necrosis may attack the temporal bone in any of its component parts, the brain and its membranes may become implicated, and meningitis, cerebral and cerebellar or subdural abscesses, epilepsy, or insanity may result. Facial paralysis may occur and become permanent. The large blood-vessels may become affected, producing phlebitis and thrombosis of the lateral sinus, and so causing metastatic abscesses in the lungs, liver, or kidney, or an ulcerative process may ensue, extending to the large vessels, and they may become eroded, and fatal hæmorrhage result.

Richard Neale, M.D.

Celluloid has been employed to replace glass in the manufacture of artificial eyes—principally in Germany—but although the celluloid eyes have the advantage of being less readily fractured, their use sets up irritation, and they soon exhale a disagreeable odour. They lack, moreover, the *éclat* and the life-like resemblance of the glass and enamelled eyes.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

2320. Gibbard.—A Case of Atropine Poisoning. (*Lancet*, Nov. 16.)

2321. Cammann, D. M., M.D.—Thirty-three Cases of Poisoning by Tyrotoxicon. (*New York Med. Jour.*, Nov. 23, 1889.)

2322. Martin, John.—A Case of Tyrotoxicon Poisoning. (*Medical News*, November 1889.)

2323. Haley, Robert, M.D.—A Case of Antifebrin Poisoning. (*Weekly Med. Review*, Nov. 9, 1889.)

2324. Watson, C. S., M.D.—A Case of Ptomaine Poisoning. (*Brit. Med. Jour.*, Nov. 30, 1889.)

2325. Richman, S. T., M.D.—A Fatal Case of Carbolic Acid Poisoning. (*New York Med. Jour.*, Nov. 30, 1889.)

2326. Biller, J. G., M.D.—Poisoning from Gasoline. (*New York Med. Jour.*, Nov. 30, 1889.)

Art. 2320. *Gibbard on a Case of Atropine Poisoning.*—The patient, a woman aged 21, was admitted into the Newcastle-on-Tyne Infirmary under the care of Dr. Oliver, twelve hours after having taken nearly an ounce of 'eye drops,' containing four grains of sulphate of atropine to the ounce. She was flushed, lips dry and blistered, conjunctivæ injected, pupils widely dilated and not responding to light. There was muttering delirium with twitching of the fingers and toes. Temperature 101° F., pulse 135, respirations 32, irregular; no vomiting, retention of urine, increase of plantar and patella reflexes. There was no rash; the urine was drawn off, and was found to be free from albumen. She was given a dose of castor-oil with eight minims of tinct. opii in it, and in the course of the evening two hypodermic injections of morphine of three minims each. She was much better the next morning and steadily progressed to recovery. The points to which Mr. Gibbard calls especial attention are:—1. The high temperature for the first three days, which is in accordance with the recent teaching of therapeutists, the heightened pulse being an evidence that a large dose had been taken, for in small doses atropine would slow the pulse. 2. The patient was much constipated, notwithstanding the well-known effect of this drug in increasing peristalsis. This Mr. Gibbard ascribes to the peculiar effect of atropine upon the secretion of the mucous surfaces. 3. The good effect of morphine, the skin becoming cool and moist, and the delirium entirely disappearing after the second injection.

2321. *Cammann on Thirty-three Cases of Poisoning by Tyrotoxicon.*—Dr. Cammann's cases occurred in a school containing 150 children. Seven were taken ill one day, and within the next five or six days sixteen more were affected. One child was 4, two were 6, and the rest were between 7 and 14 years of age. The symptoms, which of course varied in severity, were frontal headache, nausea and vomiting, diarrhœa, and high temperature. The children were ill for two or three days, and then recovered, with the exception of pallor. Quinine was administered to those who had a high temperature; otherwise no special treatment was adopted. The headache was severe in some of the cases; in no instance did the temperature exceed 105°; the cases in which vomiting and diarrhœa were most marked were not in the ones in which the highest temperature was found; one boy developed double pleuro-pneumonia. No defect could be detected in the sanitary arrangements of the institution, nor had any change been made in the diet. The milk was suspected, but on examination no tyrotoxicon could be detected, but the milkman was one who had a somewhat evil reputation, and the clinical features agree closely with those in a series of cases reported at the ninth International Congress, when the milk had been obtained from the same milkman, though on that occasion also no tyrotoxicon was discovered in it.

2322. *Martin on a Case of Tyrotoxicon Poisoning.* Dr. Martin's patient was a married lady who was taken ill at breakfast with severe headache, roaring in her ears and dizziness; her breakfast had consisted of milk toast, coffee and milk. Convulsive movements of the limbs soon began, accompanied by a choking sensation; she grew so weak that she required assistance in reaching her bed. In five or ten minutes she became delirious, and in less than half an hour was totally unconscious, in which state she remained ten or fifteen minutes, and during which time there was an involuntary discharge of urine. The convulsive movements continued for some half hour after the return of consciousness, and the choking sensation for still longer; the headache increased, and she also complained much of pain at the chest. An emetic of sulphate of zinc produced free emesis, with some benefit, but she remained very weak all day, and was ailing for a week. The husband, who had partaken of coffee and milk, also felt faint and giddy, and was obliged to lie down for a while. On examination the milk was found to contain tyrotoxicon.

2323. *Haley on a Case of Poisoning by Antifebrin.*—The patient, a married woman, aged 28, consulted a druggist for facial neuralgia, and was given a large number of powders of antifebrin, each containing about four grains, with instructions to take a powder every two hours till she felt better. She followed this advice, and on the third day, feeling no better, she took one at 11 A.M. and another at 12 (noon). Twenty minutes later, whilst sitting by the stove, she fell out of her chair, became unconscious, grew cold, purple in the face, and seemed to be choking. Dr. Haley saw her at 1 P.M., when she had been partly revived by the administration of some strong coffee; her temperature was subnormal, pulse 120, respirations 9 or 10, pupils slightly dilated, tongue somewhat dusky. She seemed to understand what was going on around her. Brandy and alcohol were given with tr. capsici and ginger, and in three hours most of the symptoms had disappeared. She could talk, and said her tongue felt stiff and her skin everywhere numb; her hands and feet felt like pieces of wood. She stated that after swallowing the last powder a violent pain soon came on in her left side, extending to the stomach; then she became chilly, and could not move her eyes or her tongue, and her head felt as if fixed in a vice; she then became unconscious. She completely recovered.

2324. *Watson on a Case of Ptomaine Poisoning.*—At a meeting of the Clinical Society, Dr. C. Scott Watson read an account of a man who experienced symptoms akin to those of ptomaine poisoning after partaking of a meal containing mackerel and beef. He had headache, giddiness, anorexia, and staggering gait, and was markedly somnolent. Next day his face was flushed, pupils dilated, tongue dry, pulse 116, no fever. He was ordered a calomel purge; the next day he was acutely delirious and the breathing became stertorous; the tongue and mouth were dry; there was no rash; the bowels did not act, and no urine was passed. Next day another dose of calomel was given, and later on two drops of croton-oil, and an injection of pilocarpine without effect; later in the same day he passed urine free from sugar or albumen, and the bowels acted, the motion being offensive, frothy, and green. He slowly recovered and was convalescent on the seventh day, but an attack of gout came on which lasted a month.

2325. *Richman on a Fatal Case of Carbolic Acid Poisoning.*—A baby, seven months old, received a slight burn on the arm from some hot coffee; the mother applied a mixture of equal parts of carbolic acid and sweet oil, using about half an ounce of a 95 per cent. solution of carbolic acid. In two hours the child passed into a state of stupor, and the doctor was then called in. He found the eyes fixed, pupils contracted to pins' points, pulse 120, breathing irregular, occasionally sighing, swallowing performed with great difficulty, the breath had an odour of carbolic acid. Four minims of the fluid extract of belladonna were given by the mouth, and in an hour the pupils had begun to dilate; swallowing was less difficult; a small quantity of whisky was then given with two minims of belladonna; at the end of another hour the pupils were normal; there was a well-marked erythematous blush on the skin; swallowing was better. Small doses of nitrate of potassium and whisky were then ordered to be given at intervals. Twelve hours later the pulse was 160; weaker; temperature 103°; face pale and pupils dilated; the child grew weaker, convulsions set in, and finally the child died about thirty hours after the application of the carbolic acid.

2326. *Biller on Poisoning by Gasoline.*—Gasoline is one of the products of petroleum used for illuminating purposes, two interesting cases of poisoning by which are recorded by Dr. Biller. A baby, aged 18 months, swallowed some gasoline and was found by its mother in less than five minutes lying unconscious on the floor. In ten minutes Dr. Biller saw the child and found it unconscious, breathing eight or ten times a minute; pulse imperceptible, the heart's impulse exceedingly feeble; eyes rolled back; face livid. The skin of the neck and chest was bright red where some of the oil had been spilt, the jaws were firmly closed, the limbs rigid, the abdomen was distended and tympanitic, the body surface cold and clammy. The child was put into a warm bath and an attempt was made to give it an emetic; it revived for a little while and seemed to recognise its parents, but the pulse was still imperceptible, and after remaining in this state about two minutes it suddenly dropped over, gasped a few times, and was dead. The child did not live more than thirty minutes after taking the poison. The second case was an infant, 19 months old. He was seen by the doctor in less than three minutes from the time of taking the gasoline. He was then almost comatose, breathing slow, pulse imperceptible, eyes rolled back, pupils dilated, body surface cold, extremities livid. The mouth was filled with a sticky saliva that the child would occasionally force to the lips but not spit out, and the mouth and fauces were very red. Twenty drops of fluid extract of ipecac were given by the mouth, and two drops of fluid extract of digitalis and fifteen of brandy hypodermically. The stomach was washed out with the pump, the food and fluid returned, smelling strongly of gasoline. Two drops of nitrite of amyl were placed on a handkerchief and held to the child's nose; soon the pulse began to flutter and grow quite strong; every three or four minutes the child would drop into a half-stupid state and become pale and blue; then the amyl was repeated. In an hour and a half after taking the poison he had recovered enough to talk and notice things and was then out of danger.

BACTERIOLOGY AND PARASITIC DISEASES.

RECENT PAPERS.

2327. Wyssokowitsch, W.—A Study of Endocarditis. (*Arch. für Path., Anat., und Phys.*, c. iii., Heft 2, p. 301.)

2328. Baracz, Dr. Roman von (Lemberg).—Two Cases of Actinomycosis. (*Med.-Chir. Centralbl.*, No. 11, 1889.)

2329. Graucher and Deschamps.—The Typhoid Bacillus in the Soil (*Recherches sur le bacille typhique dans le Sol*). (*Arch. de Méd. Expér.*, January 1889, p. 33.)

2330. Trenkmann.—The Staining of the Flagella of Spirilla and Bacilli. (*Centralbl. für Bakteriologie und Parasitenkunde*, vol. vi., No. 16-17, Oct. 15, 1889.)

2331. Verneuil, Professor.—On Neoplasmic Microbes. (*Rev. de Thérap.*, October 1889.)

Art. 2327. *Wyssokowitsch on a Study of Endocarditis.*—Twelve cases of endocarditis in man were examined; one of them being ulcerative. In the cases of acute and chronic endocarditis no micro-organisms were found; in the ulcerative cases, stayphylococcus pyogenes aureus was found and cultivated. Malignant endocarditis, similar to that seen in man, was induced in rabbits by injuring the valves by means of a sound introduced into the left side of the heart through the right carotid, and then injecting the streptococcus pyogenes into the veins of the ear. The lesions were necrotic rather than inflammatory; and the same applied to the various emboli in the organs. The vascular lesions due to the micro-organisms occurred where the probe had rubbed the mitral valve, aorta, and carotid as well as on the torn aortic valves. If the injection was made without passing a probe, or more than two days after its passage, no endocarditis ensued. When staphylococcus was used instead, the lesions were more decidedly suppurative, and the infarcts were suppurative rather than anæmic necroses. When the probe was introduced, but no injections made, there was no reaction at all. The micrococcus tetragenes, the bacillus pneumoniæ, and the septic coccus of Nicolaier produce similar results. It is noteworthy that the merest graze of the probe was sufficient to determine a malignant endocarditis if the animal were infected with micro-organisms within two days, but not afterwards. G. N. Pitt, M.D.

2328. *Von Baracz on Two Cases of Actinomycosis.*—Case I.—A man, aged 30, had suffered from severe toothache on the left side of the lower jaw for some weeks; a dentist had then extracted the most painful tooth. A steadily growing painful tumour soon made its appearance at the site of the extracted tooth, and movement of the jaw was painful. All the left lower molars that remained were carious, also the last right lower molar. A walnut-sized tumour existed on the face, near the angle of the lower jaw; this was red and painful, and showed distinct fluctuation in several places; the surface was rather rough. Pus could be seen through the thinned cuticle. The margin was indurated. The mouth could only be opened about a third of an inch. The peculiar character of the abscess, its gradual enlargement, and the nature of the occupation of the patient (droschky proprietor and driver) led to the suspicion of actinomycosis. Two incisions were made into the abscess, which was dressed with 5 per cent. carbolised water and iodoform gauze. A more radical operation was intended soon after, but the man would not hear of it, and was only found again after some trouble. The tumour was then more flaccid and less painful; the two wounds were healing. After six weeks' time two smooth cicatrices were found; no tumour could then be felt. The pus was examined by Professors Spielmann and Kadyi, and showed the characteristic massed and isolated structures of actinomyces. No disease existed among the patient's horses or cows. Case II.—The wife of the last patient presented herself for treatment about six months afterwards. She was 23 years of age, and had lived five years in Lemberg. About three weeks before seeking aid, a small painful gumboil had appeared; this had discharged some pus to the relief of the patient, but the face remained swollen and the mouth could not be opened. About the middle of the alveolar process of the lower jaw a swelling was found divided into two parts, and outwards and backwards from this a hard tumour could be felt intimately connected with the bone—it was of the size of a walnut, and was somewhat painful. Several of the teeth were carious. The abscess was opened and well emptied of its contents—serous fluid and yellowish bodies of the size of poppy-seeds—and the wound dressed as in the last case, the patient refusing further operation.

E. J. Edwardes, M.D.

2329. *Graucher and Deschamps on the Typhoid Bacillus in the Soil.*—The investigation was undertaken with the view of discovering what happens to typhoid bacilli when thrown upon the ground. The experiments were performed in cylinders 2·40 m. in height, and 17·0 c.m. in diameter, which were filled with earth. Typhoid bacillus cultures were deposited on the surface of the earth in each tube, followed by gentle irrigation with sterilised water. As a result of their observations the authors conclude (1) that the bacillus does not filter through the soil with the water of irrigation, but that (2) it stops at a depth of 40 to 50 c.m.; (3) it lives in the soil in the midst of all the numerous and varied organisms which it contains for five and a half months after its sowing. (4). It does not penetrate into the substance of healthy peas.

Bertram C. A. Windle, M.A., M.D.

2330. *Trenkmann on the Staining of the Flagella of Spirilla and Bacilli.*—The author had devised means of staining the flagella of the spirillum undula, vibrio rugula, and small vibrios, and had shown a series of preparations in which they were stained to Professor Gärtner of Jena, who had demonstrated them in his bacteriological course, but the method had not been published when Professor Loeffler published his method of staining flagella (already described in this journal), which in principle is the same as Trenkmann's. Koch first succeeded in staining the cilia of spirillum undula, hay bacillus, and bacillus tumulus with extract of logwood. The staining was only moderately plain. He did not succeed with aniline colours. The most successful method with the latter appears, according to this observer, to be the following. A small droplet of the spirilla-containing-fluid is mixed with a larger drop of distilled water upon a cover glass, dried without heating, and placed in a fluid containing 1 per cent. tannin and ½ per cent. hydrochloric acid, in which it remains for 2 to 12 hours. It is then stained in a weak solution of dahlia (2 drops of a concentrated alcoholic solution to 20 water), fuchsin (2 to 4 drops of a concentrated alcoholic solution to 20 water), gentian violet (1 drop to 20 water), methyl violet (1 drop to 20 water), methylene blue, iodine green, methyl green, vesuvin, or Victoria blue. The preparation remains in the staining solution 1 to 4 hours, and is washed in water and examined. The flagella may be stained with any one of the aniline dyes, and very powerfully by dahlia, fuchsin, or methyl violet; still better in carbol-fuchsin (2 drops to 20 of a 1 per cent. carbol water). A second method is one with catechu-tannic acid. An excess of powdered catechu is extracted with water for a few days and filtered. The filtrate is a concentrated solution of catechu-tannic acid. The acid impregnates the cilia somewhat weakly without the addition of acid. The action is essentially strengthened by the addition of acid, particularly of carbolic (4 parts of saturated solution of catechu-tannic acid to 1 of a concentrated watery solution of carbolic acid for 2 to 12 hours). After washing the specimens they are placed in the aniline colour solution. The strongest staining effects are done with dahlia and fuchsin. A third method consists in placing the preparations in a concentrated solution of extract of logwood for 2 to 12 hours, washing, and then transferring into the solution of the aniline dye. The staining with fuchsin is the most successful. The addition of acid seems also in this case to improve the penetration of the stain, especially of hydrochloric acid (½ per cent.), gallic acid (½ per cent.), or carbolic acid (1 to 2 per cent.).

Vincent D. Harris, M.D.

2331. *Verneuil on Neoplasmic Microbes.*—In a paper read by Professor Verneuil before the Académie des Sciences on the subject of the micro-organisms of the various new growths he concludes:—1. That the tissue of malignant neoplasms is liable to be invaded, at a given moment, by divers micro-organisms, of which neither the origin nor the genus is known. 2. That while the causes and the mechanisms of the invasion are unknown, when this takes place, it profoundly modifies the evolution and the nutrition of the tumours, provoking increased rapidity of growth, softening, and disintegration. 3. That these microbes are not met with in all kinds of neoplasms, nor in all neoplasms of the same kind, nor even in all points of the same neoplasm. They are not met with, for example, in lipomata, nor pure fibromata, nor in sarcomata, nor in the early stages of slow-growing cancers, covered with healthy skin, whereas they are almost invariably present in softened and ulcerating neoplasms. 4. These microbes, in addition to their irritating and pyrogenic effects on the tissues, appear to be capable of causing intense and irregular febrile symptoms while still enclosed in a rapidly growing tumour, beginning to break down. Moreover, if, during the ablation of a tumour containing them, they come into contact with the raw edges of the wound, they inoculate and contaminate it to the extent of often giving rise to a septicæmic fever capable of causing death. 5. That in view of this fact certain precautions are evidently incumbent on the surgeon who undertakes their removal, to prevent subsequent infection.

Alfred S. Gubb.

ANATOMY.

RECENT PAPERS.

2332. Trestrail and Doran.—A Case of Mylacephalous Acardiac Twin. (*Trans. Obstet. Soc.*, vol. xxxi.)

2333. Poirier, M. P.—On an Anomaly of the Kidneys (*Anomalie des Reins*). (*Bull. de la Soc. Anat. de Paris*, June 1889, p. 436.)

2334. Hepburn, D., M.B.—The Development of Diarthrodial Joints in Birds and Mammals. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 507.)

2335. Thomson, A., M.B.—The Influence of Posture on the Form of the Articular Surfaces of the Tibia and Astragalus in the Different Races of Man and the Higher Apes. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 616.)

2336. Shore, T. W., M.D., and Jones, H. L., M.D.—On the Structure of the Vertebrate Liver. (*British Medical Journal*, Aug. 3, 1889.)

2337. Bowen, J. T.—The Epitrichal Layer of the Human Epidermis. (*Anat. Anzeig.*, Jahrg. iv., No. 14, S. 441.)

2338. Humphry, Professor G. M.—Loose Bodies in Joints. (*Brit. Med. Jour.*, Sept. 19, 1888.)

Art. 2332. *Trestrail and Doran on a Mylacephalous Acardiac Twin.*—The monster was born with a fully-developed female child which survived for half an hour. Mr. Doran's dissection showed the presence of a single kidney, and a pouch of peritoneum, containing large intestine, with mesentery. There was a clitoris and cloaca, a left lower extremity and left side of pelvis, sacrum, and coccyx. The lower lumbar vertebræ, right side of pelvis, and small intestines were rudimentary, and the ureter ended in the integument. A blunt point of flesh represented the right lower extremity. The paper contains a useful account of the varieties of acephalus, with notes on specimens in museums in London and elsewhere.—[It is gratifying to find Mr. Doran drawing attention to the confusion so frequently made between anencephalus and acephalus, two conditions which in appearance and etiology are totally distinct.—*Rep.*]

2333. *Poirier on an Anomaly of the Kidneys.*—The specimens were obtained from the body of an old woman. The right kidney lay on the posterior half of the iliac fossa of the same side, and was of normal size, the hilus looking forward. A large vein proceeded from this, passed upwards, and entered the inferior vena cava at the level of the disc between the second and third lumbar vertebra. No artery penetrated the hilus, but six entered various parts of the periphery. These were derived as follows: 1, from aorta, 1 centimètre above its bifurcation; 2, 3, and 4, from the angle formed by the aorta and right common iliac artery; 5, from aorta at the angle of bifurcation; 6, from bifurcation of common iliac. The left kidney lay in the pelvis, and almost on the middle line, impinging on the fifth lumbar vertebra for about 2 centimètres. Like the right, it was slightly lobulated. Its hilus, which was turned forwards, emitted a large vein, which entered the inferior vena cava at the same level as the left common iliac vein. The kidney received four arteries—1, from aorta at the level of its bifurcation; 2, from the angle of bifurcation; 3, from bifurcation of common iliac; 4, from the common trunk of sciatic and internal pudic.

2334. *Hepburn on the Development of the Joints.*—1. The bone-matrices and the articular disc possess a tissue continuity, and are derivatives of a common blastema, of which the articular disc is at first the undifferentiated form. 2. The articular disc may conduct itself as follows: (*a*) it may develop into a plate of cartilage, and form a synchondrosis, *e.g.* the articulation between basi-occipital and basi-sphenoid bones; (*b*) it may differentiate into fibrous tissue, and form a syndesmosis or synarthrosis; (*c*) it may partly cleave and form a joint cavity. 3. The joint cavity appears within the articular disc, at a period when the process of chondrification is at some distance from the cavity. 4. If the cavity remain of small size, and the surrounding articular disc develops into fibrous tissue, an amphiarthrosis is formed, *e.g.* the joints between vertebral bones. (This is especially well seen in some cetacea, and probably the epiphyseal plates on the bodies of vertebræ are also derived from the articular disc.) 5. The cavity may enlarge to form a diarthrosis. 6. When the joint cavity is single we have a simple diarthrosis. When the cleft is single, but does not extend across the axis of the disc, an inter-articular ligament is formed. When there are two cavities we have a diarthrosis, with an interposed meniscus. When the two clefts unite in the centre, we have the condition seen in an incomplete meniscus. 7. The proximal and distal segments of the articular disc develop into the articular cartilages of the joint, and probably form part, if not all, of the epiphyseal ends of the bones. 8. The circumference of the articular disc develops into the capsule of the joint. 9. Inter-articular fibro cartilages and ligaments are derived from the articular disc as the result of the modifications of the joint-cavity. 10. The cells lining the joint-cavity have a double fate. Those in relation to the ligamentous structures, and thus within reach of a direct blood supply, become specialised into a synovial membrane. Those applied to the articular cartilage are present in the bird at the period of hatching; but in the case of the mammal they have undergone degeneration. Probably in both cases they disappear as the result of friction. Pathology affords corroborative evidence of the derivatives of the articular disc, for the structures enumerated as being developed from it are simultaneously affected by pathological conditions.

2335. *Thomson on the Influence of Posture on the Tibia.*—1. The external condyloid surface of the tibia presents varying degrees of convexity in the different races of man. 2. In the higher races the convexity is slight. 3. It is most pronounced in savage races, and probably will be found characteristic of ancient races and fossil man. 4. It appears to be developed in connection with the more frequent use of the limb with the knee strongly flexed, probably in 'squatting.' 5. As yet there are insufficient data to form any conclusion as to the relation of this tibial convexity with a backward curve of the upper part of the shaft of the bone. There is some reason to suppose that the condyloid convexity is less when the backward curve is present. 6. Facets are occasionally developed on the anterior margin of the inferior articular surface of the tibia, and on the neck of the astragalus, the facets coming into contact with one another in extreme flexion of the foot or the leg; they are rare in higher, almost invariable in savage, races, and are probably due to the 'squatting' posture. 7. Platyknemia occurs most frequently in those races the members of which, dwelling in rough countries, have to obtain a subsistence by occupations, such as climbing and hunting, which bring more forcibly into play the muscles of the leg, particularly the tibialis posticus. 8. The apes are characterised by well-marked condyloid convexities produced by more constant use of the limb with knee flexed. 9. The gorilla and orang have the inferior tibial and astragaloid facets usually well marked. The chimpanzee does not appear to display this peculiarity so frequently. These facets are due probably to climbing. 10. The evidence is in favour of the acquisition and not the transmission of these characters.

2336. *Shore and Jones on the Vertebrate Liver.*—The authors consider that the vertebrate liver has probably been evolved somewhat as follows:—1. The formation from the gut of a hollow diverticulum, constituting at first a simple tubular gland, lined by specially modified secreting endoderm. This stage is represented by the simple hepatic diverticulum of amphioxus. 2. The multiplication of the endoderm cells at the cæcal extremity to form a solid mass of cells, slightly penetrated by minute channels for escape of secretion, the original diverticulum becoming a duct. 3. The further multiplication of the cells of this mass, and its penetration by blood-vessels, so as to divide it into solid anastomosing rods of secreting cells, drained by a system of intercellular canals. This stage is probably preserved in the liver of the lamprey. 4. The more complete penetration of blood-vessels between the cylinders of hepatic cells, so as to form a well-marked system of broad blood-channels, separating a network of rods of cells, which come to be arranged in a single layer around bile capillaries. This is the permanent condition in fishes, amphibians, and reptiles, and is repeated in the development of the mammal. 5. A still finer penetration by blood-vessels, and further subdivision of the hepatic cylinders, associated with a rearrangement of the blood capillaries around foci of exit for the blood (hepatic vein radicles), so as to form hepatic lobules. This is the condition found in the adult mammalia.

2337. *Bowen on the Epitrichal Layer of the Epidermis.*—1. The outermost epidermal cells of young embryos form a distinct histological layer. 2. This layer disappears by the sixth month over most portions of the body. 3. In certain places, as in the region of the nail, this layer undergoes a keratosis, and forms a part of the stratum corneum. 4. There are good reasons for regarding this layer as homologous with the epitrichium of animals. 5. The nail is a modified portion of the stratum lucidum, and becomes exposed by the loss of the epitrichal layer. Whether the cells overlying the stratum lucidum in all parts are homologous with the epitrichium, must be decided by further investigations. Bertram C. A. Windle, M.A., M.D.

2338. *Humphry on Loose Bodies in Joints.*—Professor Humphry maintains the older view that these bodies are developed from the synovial processes, and does not believe in 'quiet necrosis' or separation of a piece of articular cartilage or bone, excepting in rare instances. In cases recorded by Simon and Teale a violent wrench appears to have caused this separation. But in none of the instances that Professor Humphry has read of in the writings of others, in which the formation of a loose body has been attributed to necrosis, does the evidence of such a process appear to him to be satisfactory. Loose bodies may certainly resemble articular cartilage and bone, and this is an argument apparently in favour of the separation of bone and 'quiet necrosis' theory. This resemblance, however, also exists in loose bodies, which form part of a synovial outgrowth, these being found in microscopical characters and general features to resemble portions of articular bone and cartilage rather closely. They may be distinguished, however, by the presence of fibro-cartilaginous or fibroid, as well as cartilaginous tissue; besides, they are often too large to have possibly formed part of the bony limits of the joint. In other points, indicated by Professor Humphry, a loose body differs histologically from a fragment of bone with a covering of articular cartilage separated from the surface of a joint by force.

ALBAN DORAN.

PATHOLOGY.

RECENT PAPERS.

2339. BROSSET.—Congenital Malformations of the Œsophagus (*Des Vices de Conformation de l'Œsophage*). (*Lyon Medical*, tome lxi., No. 21, p. 109; No. 22, p. 150.)

2340. TEMOIN, DR.—Fibroma of the Female Urethra. (*Bulletins de la Soc. Anatom.*, de Paris, Mai 1889, 16 fascicule.)

2341. BUGNION, DR. E.—Description of a Dipygus Parasiticus. (*Revue Médicale de la Suisse Romande*, June 1889.)

2342. BOLDT.—On an Amorphous or Acormous Acardiac Twin. (*American Jour. of Obstet.*, April 1889.)

2343. ZIEHL.—On Paralysis of the Third Division of the Trigeminus (*Ein Fall von isolirter Lähmung des ganzen dritten Trigeminusastes, nebst einigen Bemerkungen über den Verlauf der Geschmacksfasern der Chorda Tympani und die Innervation des Geschmacks überhaupt*). (Virchow's *Archiv*, Band 117, Heft 1, S. 52.)

2344. VEITH.—Vaginal Cysts (*Vaginalepitheden und Vaginaldrusen*). (Virchow's *Archiv*, Band 117, Heft 1, S. 171.)

2345. MALLET, M. H.—Spontaneous Rupture of the Heart (*Rupture spontanée du Cœur*). (*Bull. de la Soc. Anat. de Paris*, 1889, p. 400.)

2346. CHAINTRE, A. — On Ectrodactyly (*Ectromélie: vices de conformation des deux mains et des deux pieds*). (*Lyon Médical*, June 23, 1889, p. 257.)

2347. HEYMAN, DR. R.—On the Formation of Bone in the Trachea and Bronchi (*Ein Fall von Knochenbildung in der Schleimhaut der Trachea und der grossen Bronchien*). (Virchow's *Archiv*, Band 116, Heft 2, S. 329.)

2348. PEIPER, DR. E.—On the Alkalinity of the Blood (*Alkalimetrische Untersuchungen des Blutes unter normalen und pathologischen Zuständen*). (Virchow's *Archiv*, Band 116, Heft 3, S. 338.)

2349. LESSER, DR. E.—On Hereditary Hypospadias (*Beitrag zur Vererbung der Hypospädie*). (Virchow's *Archiv*, Band 116., Heft 3, S. 537.)

2350. LEVY, DR.—Hereditary Absence of Prepuce amongst Jews (*Ueb. Erblichkeit des Vorhaut Mangels bei Juden*). (Virchow's *Arch.*, Band 116, Heft. 3, S. 539.)

2351. ADIE, DR. J. R.—Case of Congenital Malformation of the Intestines producing Obstruction of the Bowels. (*Indian Med. Gazette*, April 1889, p. 120.)

2352. TURNER, W. A., M.B.—The Innervation of the Muscles of the Soft Palate. (*Jour. of Anat. and Phys.*, vol. xxiii., p. 523.)

2353. BERNHARDT.—Contributions to the Pathology of so-called Rheumatic Facial Paralysis. (*Deutsche med. Zeitung*, No. 86, 1888.)

2354. KOOYKER.—On the Causation of Gastroliths in Men. (*Zeitschr. für klin. Med.* xiv., S. 203; and *Centralbl. für die med. Wissensch.*, Oct. 27.)

2355. KÜSTER, E.—A Case of Primary Tuberculosis of the Kidney. (*Deutsche med. Zeitung*, No. 88, 1888.)

2356. ZOEGE-MANTEUFFEL. — Echinococcus of the Thyroid Gland. (*Mittheilungen aus der chirurg. Universitäts Klinik zu Dorpat*, and *St. Petersburger med. Wochenschrift*, No. 33, 1888.)

2357. ZACCHI.—On Perforating Ulcer of the Duodenum. (*Lo Sperimentale*, September 1888.)

2358. LANNELONGUE. — On Intracranial Dermoid Cysts.

2359. BRUCE CLARKE.—On Gangrene after Typhoid Fever. (*Illustrated Med. News*, September 1889, p. 301.)

2360. GODLEE.—On a Few Cases of Meningocele. (*Illustrated Medical News*, October 1889, p. 73.)

2361. ALBERT.—On Successive Eruption of Supernumerary Teeth from a Bony Tumour of the Upper Jaw. (*Illustrated Medical News*, August 1889, p. 125.)

2362. ATKINS, RINGROSE.—On the Morbid Histology of the Nervous System in Chronic Alcoholism.

ART. 2339. *Brosset on Congenital Malformations of the Œsophagus.*—The author arranges the congenital defects of the œsophagus under six groups. I. Absence of a part of the œsophagus, the superior segment terminating in a *cul-de-sac* at 3 or 4 centimètres from the upper borders of the thyroid cartilage, the inferior opening into the trachea or into a bronchus. This is the commonest condition, having been found in eight out of fourteen cases by Koenig, in forty-three collected by Mackenzie, and in five others enumerated by the author. The superior segment is larger, and has thicker walls which contain striated muscular fibres. The lower generally opens into the lower part of the trachea at its bifurcation, very rarely into a bronchus. Its walls contain only unstriated muscular fibres. A cord is generally found uniting the two portions; this may consist of muscular fibres intimately united with the posterior wall of the trachea. II. Tracheo-œsophageal fissure; a simple communication between the two passages, the remainder of the tubes being normal. Three cases of this malformation have been recorded. The opening was in each case situated at the superior part of the two tubes. III. Absence of the œsophagus in a greater or less part of its course, a fibro-muscular band uniting the two portions. The superior *cul-de-sac* terminates at a variable height. This form is analogous to those cases of atresia ani in which a fibrous band passes from the intestinal *cul-de-sac* to the posterior surface of the bladder, vagina, or uterus, or to the anal pouch. IV. Annular or tubular constrictions of the œsophagus.—These may be situated at any part of the tube, but generally at its upper portion. They are formed by all the coats of the tube. V. Dilatations and diverticula of the œsophagus. Förster and Gruber consider them to be connected with the congenital constrictions with which they usually co-exist. VI. Division of the œsophagus with reunion at its inferior extremity. This division may be met with of two kinds. (*a*) A longitudinal septum divides the œsophagus into two symmetrical halves. (*b*) The tube bifurcates into two portions, again uniting below. The latter part of the paper is occupied with the etiology, prognosis, and treatment of the various conditions.

2340. *Temoin on a Case of Fibroma of the Female Urethra.*—The patient was under the care of M. Tillaux, in the Hôtel Dieu. She suffered from local pain and difficulty in micturition. Three-quarters of the vulvar orifice were blocked by a swelling, the size of a hen's egg. It proved to be a tumour springing from under the mucous membrane of the urethra, and was removed by M. Tillaux. The tumour was made up of fibrous tissue, with a few muscular fibres. Tumours of this kind have been known to undergo cystic degeneration, simulating prolapse of the bladder through the urethra.

2341. *Bugnion on Parasitic Fœtus: the Autosite a Multiparous Woman.*—Dr. Bugnion describes an interesting case, recalling 'Laloo,' who bore a parasitic fœtus attached to his epigastrium (see *Trans. Path. Soc.* vol. xxxix., 1888, p. 427, Sutton and Shattock). The 'autosite,' whose portrait is given, is a young married woman, born at Reims in 1869. She is well developed, and of rather pleasing appearance. She is known as the *dame à quatre jambes.* To the os pubis is attached a rudimentary pelvis, with long, deformed, atrophic lower extremities. There are indications of nipples, but no external genitals. In the 'autosite' the vulva lies far back, the perineum forming a thin septum. She married when 14 years and 9 months old; her first child was born in March 1885, her second in December 1888; they were free from malformation, and delivered at term without instruments. She walks well; the parasite hardly shows through the outline of her clothing. Dr. Bugnion classifies her as Dipygus parasiticus, more precisely as a *pubimèle* or *pygomèle pubien.* As she has borne two children before she was 19½ years old, she would probably be classified by scientific obstetricians as a multipara.

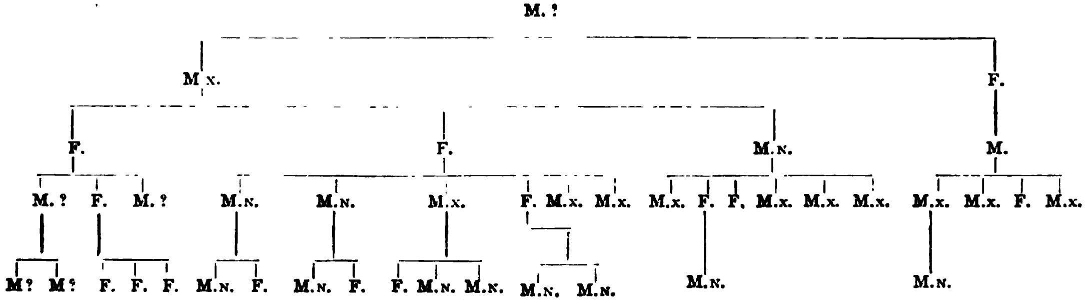
2342. *Boldt on an Amorphous or Acormous Acardiac Twin.*—On December 18, 1888, Dr. H. J. Boldt exhibited before the Obstetrical Society of New York a 'Fœtal Monstrosity without a Trace of Body.' According to the report in the *American Journal of Obstetrics* for April 1889, the specimen was expelled from the uterus of a woman, aged 33, immediately after the birth of her sixth child, which was well formed. The placenta followed the monster. The child and the monster had placenta and membranes in common, but each had a distinct umbilical cord. The normal child's cord ran into the centre of the placenta; the monster's cord had a marginal insertion. The monstrosity, which is figured in the journal above quoted, was oval, and measured nearly four inches in long diameter. It had the appearance of a head with two imperfectly developed faces. There seemed to be great doubt as to the identification of the features. When fresh, the specimen contained two to three ounces of a viscid liquid, 'but an accident, which broke the skin, permitted this to escape.' [The connective tissue of an acardiac fœtus is always more or less œdematous, and generally contains large cystic cavities filled with fluid.—*Rep.*] 'Cartilaginous plates' could be seen on examination of the monster by transmitted light, and were believed to represent two frontal and two parietal bones. The umbilicus was inserted almost midway between the 'faces,' which lay on the same side of the monster, but at opposite ends. The specimen had shrunk considerably through the action of alcohol. [This is constantly seen in museum specimens of acardiac fœtus.—*Rep.*] Dr. E. H. Grandin expressed great scepticism as to the existence of a second face. He expressed a hope, in which we concur, that the monster would be dissected by the Society's pathologist. Strange to say, no mention was made, either by Dr. Boldt or by any Fellow of the Society who took part in the discussion, of what was evidently the true character of the monster. The above account and the excellent woodcut in the *American Journal of Obstetrics* show that the monster was an acardiac twin. The literature on the subject is very extensive. Dr. Trestrail, of Aldershot, and the reporter read a case before the Obstetrical Society of London last January. It is now published in that Society's *Transactions*, Part I., January-February 1889. The reporter described the dissection of Dr. Trestrail's monster at length, with drawings, and also gave details of the thirteen human acardiacs preserved in London museums, adding sketches of some rare examples. The distinguishing feature of an acardiacus is that it is connected, either through its umbilical cord or its umbilical vessels, with the cord of a strong, generally well-formed embryo, the heart of which carries on the circulation in the acardiacus. It should therefore be more correctly termed an allantois-parasite or placenta-parasite (omphalosite). The specimen described by Dr. Boldt was probably of the variety known as acardiacus amorphus; but it may have been a true acardiacus acormus. In acormus an ill-formed head is present, with little trace of a neck or trunk. It is exceedingly rare; no specimen exists in any London museum. When traces of a trunk are more developed the acardiac is sometimes termed mylacephalus. The commonest form of acardiac consists of two legs and a rudimentary trunk. Full references to cases of acormus and other acardiac twins are to be found in Ahlfeld's *Missbildungen des Menschen*, 1880. ALBAN DORAN.

2343. *Ziehl on Paralysis of the Third Division of the Trigeminus.*—The author's conclusions are as follow: 1. The sensation of taste in the anterior two-thirds of the tongue (sometimes in a smaller area) is supplied by the lingual. 2. The fibres in question pass through the chorda tympani, by means of which they run with the facial in the Fallopian aqueduct up to the geniculate ganglion or its neighbourhood. From this they pass through the N. petrosalis superficialis minor, either directly or through the tympanic plexus (R. communicans N. facialis), apparently in both ways, to the otic ganglion, and from this through its connecting fibres to the third portion of the trigeminus with which they enter the brain through the Gasserian ganglion. Of this path, the way from the geniculate to the otic ganglion is hypothetical, the remainder is rendered more certain by pathological observations. 3. There is no certain evidence (in man) for another path, *e.g.* through the second part of the fifth nerve. Such individually different paths are possible, but there is no certain observation to confirm the point. 4. The presence or absence of taste sensation in the anterior segment of the tongue, renders possible at times the diagnosis of the position of a disease in the third part of the trigeminus (within or without the skull). 5. The glosso-pharyngeal is the taste nerve for the hinder segment of the tongue. These fibres belong to it and do not come from the trigeminus (Gowers). 6. The surest evidence of a paralysis of the glosso-pharyngeal at the base of the skull is absence of taste in the hinder segment of the tongue.' 7. The lingual is the sensory nerve for the whole tongue. Some sensory fibres, however, at times for the point of the tongue, come from the third part of the trigeminus (all or some only?), not directly through it, but with the taste fibres through the otic ganglion, facial or chorda tympani.

2344. *Veith on Vaginal Cysts.*—Cysts of the para-vaginal tissue can project into the vagina. Proper vaginal cysts may be formed (*a*) from united mucous membrane folds (Winckel); (*b*) especially from lymph follicles (Schroeder), and the lymphatic apparatus (Spiegelberg); (*c*) in the interstitial connective tissue from passages therein (Eppinger); (*d*) out of the remains of the Wolffian ducts (Veit); (*e*) out of anomalous developments of the Müllerian ducts (Freund); (*f*) from extravasations of blood in the connective tissue (Lebedeff and Winckel); (*g*) out of the true glands possibly, for which, however, there is no actual evidence. The author's own observations lead him to conclude that the glands are seldom the starting-point of cyst formation.

2348. *Peiper on the Alkalinity of the Blood.*—1. The alkalinity of the human blood fluctuates within narrow limits; it is lower in children than in adults, and in females than in males. 2. During digestion the alkalinity of the blood increases. Severe vomiting leads to a marked increase. Increased muscular action and strychnin spasm are followed by a considerable decrease. 3. In leukæmia, diabetes mellitus, arthritis deformans, in cases of chronic joint rheumatism and severe anæmia there is, as a rule, a very considerable decrease, but in chlorosis an increase. 4. Carcinomatous cachexiæ, marked disturbances in tissue-change, destructive liver-diseases, and uræmia are usually accompanied by a decrease of alkalinity. 5. Febrile processes also lead almost regularly to a decrease of alkalinity, which depends on the height but not the duration of the fever. 6. Chloroform narcosis appears to be followed by a lowering of alkalinity.

2349. *Lesser on Hereditary Hypospadias.*—The genealogical tree of the family affords an interesting example of the heredity of this condition. (N = unaffected, x affected, ? doubtful.)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2345. *Mallet on Spontaneous Rupture of the Heart.*—The rupture took place in a male, aged 79. Of 115 cases collected by Odriozola, 36 took place between 60 and 70 years and 45 between 70 and 80. The rupture in the case on record took place at the centre of the anterior surface of the left ventricle, by far the commonest site. Its direction was vertical and its size 55 millimètres, the latter being much above the average.

2346. *Chaintre on Ectrodactyly.*—The individual affected (M., aged 25), was one of fourteen children, of whom one other only had a similar malformation. The following is his condition: *Right hand*, carpus normal; 4th and 5th digits united in same fold of skin; 3rd metacarpal is normal, but there is no digit; 1st metacarpal and thumb absent. *Left hand*, 4th and 5th digits as on right; 2nd and 3rd have no digits; thumb represented by much atrophied 1st phalanx and metacarpal. *Feet*, 1st and 3rd metatarsals are absent; the 5th toe is placed on to the 4th and 5th metatarsals; the 2nd presents a subluxation at right angles with its concavity directed outwards; the toes thus resembling a lobster's claws.

2347. *Heyman on the Formation of Bone in the Trachea and Bronchi.*—The author describes the case of a female, aged 60, in whose trachea and larger bronchi pieces of true bone were found—an unusual condition. There was perichondritis of the posterior aspect of the cricoid with perforation into he œsophagus and œdema glottidis.

2350. *Levy on Hereditary Absence of Prepuce amongst Jews.*—The author says:—'Professor Weismann, at the 61st meeting of German naturalists and physicians, as a result of his experiments, and from the grounds of circumcision, gave a negative answer to the question as to whether acquired characteristics are hereditary. So far as regards the last point, I myself was born regularly circumcised. Not only that, but my four brothers, who died as children, presented the same appearance.'

2351. *Adie on Congenital Atresia of the Intestines.*—The child, aged 17 days, presented the following condition on a *post-mortem* examination. The duodenum was narrow, about the size of a round worm, the jejunum then gradually widening until the gut expanded to nearly the adult size. Then at a point 60 inches from the stomach it suddenly terminated in a *cul-de-sac*. In this part of the gut accumulation had taken place. Travelling further downwards, from the tip of the *cul-de-sac*, a small cord was noticed about ¾ inch long, then three isolated, sausage-shaped portions of gut ½ inch long, and of the thickness of a crow quill, impervious. The first two touched one another, between the second and third was a cord about ⅛ inch long, and between the third and remainder of the gut a cord about ¼ inch long. The gut then continued pervious but of contracted size to the cæcum. The large intestine was contracted to the size of a round worm, to about 2½ inches above the anus, where it dilated so as to admit the little finger. The anus was normal and pervious.

2352. *Turner on the Nerves of the Soft Palate.*—The author concludes (1) that there is not sufficient experimental or clinical evidence to support the doctrine that the muscles of the soft palate are supplied by the portio dura; (2) that experimental evidence shows that these muscles are innervated by the internal branch of the spinal accessory (*nervus accessorius vagi*), whose fibres are distributed along with certain branches of the vagus; (3) that sufficient clinical evidence exists to prove that paralysis of the palate results from disease affecting the medullary centre, the roots, and the peripheral distribution of the vagus and its accessory nerve; (4) that with the paralysis of the palate (*palatoplegia*) there is associated paralysis of the tongue (*glossoplegia*), and of the vocal cords (*laryngoplegia*), either unilateral or bilateral, according to the situation of the disease.

Bertram C. A. Windle, M.A., M.D.

2353. *Bernhardt on Contributions to the Pathology of so-called Rheumatic Facial Paralysis.*—It is a recognised fact that rheumatic (refrigeratory) facial paralysis may have a painful prodromal stage. Webber observed this symptom in 50 per cent. of all cases. Testaz considers it even more frequently present, and holds that the duration of the painful prodromal period stands in direct relation with the duration of the paralysis. Bernhardt, from his own observations, comes to the following conclusions: of 57 cases of facial paralysis (34 men, 23 women) the presence or absence of pain was only noted in 28. In 5 cases the pain was present in all. In 8 of medium severity pain was present in 7; in 12 severe cases pain was absent in 2. Pain was thus present in all the slight cases, and absent in 3 of the severer cases; its presence therefore, can hardly justify an unfavourable prognosis. Neumann believes that only persons of an hereditary nervous temperament are disposed to facial paralysis from cold; this Bernhardt disbelieves, though he has seen 3 sisters affected with this disease. The fact that rheumatic facial paralysis may occur twice in the same individual is proved by 2 of his cases. Some statistical remarks form the conclusion of his paper: of 57 cases, 34 were men, 23 women. In both sexes the paralysis is most frequent between 20 and 50; it is often seen before 20 in men. It was on the right side in men in 20 cases (58 per cent.), on the left in 14 (41·1 per cent.). In women on the right side in 13 cases (56·5 per cent.), on the left in 10 (43·4 per cent.). Of the 34 cases in men, the paralysis was slight in 6, medium in 15, and severe in 13. Of the 23 women, 7 were slight cases, 8 medium and 8 severe. The medium and severe cases occurred generally in the winter months (November to February).

2354. *Kooyker on the Causation of Gastroliths in Men.*—A man, aged 52, presented a tumour about the size of a small apple in the epigastrium. It lay deep under the skin, was irregular and tuberculated, painful on pressure, very movable to the left, and changed its position by the movements of respiration. Spleen, kidneys, and liver were in their normal positions. The patient was extremely emaciated and cachectic, in spite of a large appetite. During observation he was never sick, but before this had several times brought up blood. The contents of the stomach contained no free HCl. Subsequently indolent gland swellings appeared in the axilla and supraclavicular fossa. The diagnosis pointed to carcinoma ventriculi, although a neoplasm in the great omentum was possible. Laparotomy was proposed to establish the diagnosis, but was rejected, as also was irrigation. The autopsy showed the presence of a large concretion, the size of the full stomach, almost filling this organ. Its weight was 885 grammes, its length 18 centimètres, greatest diameter 8 centimètres. Its colour was brown throughout, it had no nucleus, but contained several small cavities; it showed no concentric structure. Strong fæcal smell, but no scatol. Under the microscope were seen starch granules, vegetable tissue, cells containing chlorophyll, no elements of animal origin. A yellow colouring matter was extracted by ether, soluble in alkalies, precipitated by acids as a yellow powder, not chrysophanic acid. No satisfactory explanation of the swellings of the lymphatic glands was offered by the autopsy.

2355. *Küster on a Case of Primary Tuberculosis of the Kidney.*—To the Berlin Medical Society at the meeting of Oct. 24, Dr. Küster showed the kidney of a girl of 20, removed on Oct. 19. The diagnosis was made comparatively early. The young girl was admitted with fever, the urine containing pus. The source of the pus was not easy to find. The supposition that it was due to catarrh of the bladder was disproved by dilatation of the urethra and direct inspection of the mucous membrane of the bladder which was seen to be injected, but not catarrhal. The pus therefore came from higher up, one or both kidneys. The urine on examination afforded numerous tubercle-bacilli. The patient complained of no pain on palpation over the situation of the right kidney, while palpation on the left side caused severe pain in the urethra. Under chloroform a swelling was found of the left kidney; there was no doubt therefore that the left kidney was affected. Catheterism of the right ureter was negative. Primary tuberculosis of the kidney being almost always onesided at first, the second kidney becoming affected later, extirpation of the left kidney was decided on. The operation which was commenced by an incision between the twelfth rib and the crest of the ilium, was not easy, as the kidney was very adherent to the surrounding tissues. It was, however, successfully accomplished. In the first twenty-four hours the quantity of urine passed was only 400 cubic centimètres. On the next day it much increased, and the patient might be said to be out of danger. In the extirpated kidney the cortical capsule was especially invaded with groups of tubercles, and throughout the whole substance of the kidney are scattered small caseous nodules. Close inspection of the pelvis of the kidney shows caseous detritus, evidently the source of the tubercle-bacilli previously found in the urine. It appears that tuberculosis of the kidney always commences in the kidney papillæ and pelvis (Klebs).

2356. *Zoege-Manteuffel on Echinococcus of the Thyroid Gland.*—A case of tumour of the thyroid gland, which before operation, and until nearly completion of the same, was considered to be a colloid—partly cystic struma. The patient, a man aged 36, had in the right side of the neck a slow-growing tumour the size of a child's head, first noticed fifteen years before. Lately great difficulty of breathing occurred, which led to his admittance for operation. The consistence of the tumour was tolerably hard, in part elastic, with no distinct fluctuation anywhere. The operation, which was looked upon as an enucleation of the tumour, presented no difficulty until the neighbourhood of the trachea was reached, when it was found that the tumour was adherent to the trachea. As the tumour was being freed from the trachea with the scissors it was cut into, and clear fluid escaped containing numerous hydatids. The capsule was then divided in the middle line and removed. Recovery normal. Only a few cases of echinococcus cysts of the thyroid gland have been reported, and these mostly ended with perforation of the trachea and suffocation. The diagnosis was in all first arrived at after incision. In this case the diagnosis was doubly difficult as that in Dorpat; both echinococcus cysts and even struma are the rarest of eventualities. Diagnosis in analogous cases can only be made when there is undoubted fluctuation and hydatid tremor. G. D'ARCY ADAMS, M.D.

2357. *Zacchi on Perforating Ulcer of the Duodenum.*—This affection occurs much more frequently in females than males, and often gives rise to the suspicion of poisoning. For these reasons the author has put the following case on record. The patient was a robust, muscular, well-developed man, a forester by occupation. He had never suffered from any illness, but was slightly anæmic. He became involved in some *émeute*, and, with several others, found himself in prison, though a steady, respectable man. The author, who was the prison surgeon, saw him occasionally, and on the morning of April 29 the patient complained of having had pain in the region of the stomach for several days. The pain was getting worse, and he completely lost his appetite. He appeared pale and a little feverish, and was sent to the infirmary and put on strict diet. As medicine he had some laudanum in a little aromatic water. In the evening he felt better, but his temperature was 102°·2. The same night the pain suddenly became violent, making the patient constantly groan and roll about. He vomited some greenish fluid mixed with curdled milk, and afterwards some fæcal-looking matter. He was ordered cold applications to the abdomen and a hypodermic injection of morphia. Next day the abdomen was retracted, the walls rigid, and somewhat wanting in resonance on percussion. He had a scanty movement of the bowels, passed a very small quantity of urine, and still complained of violent pain in the abdomen, especially on the right side, but had now a normal temperature. About midday he vomited a considerable quantity of blood. Shortly afterwards he became comatose, and died about 2 P.M.—that is, less than thirty hours after the first complaint of pain, and less than sixteen hours after the onset of acute symptoms. The localisation of the pain at first in the right half of the epigastrium was noteworthy. At the necropsy a circular, sharply cut ulcer, the size of a sixpence, was found in the first part of the duodenum, close to the pylorus, and on the anterior surface. There was slight general peritonitis, and an abundance of bloody fluid in the abdominal cavity. In the stomach there were a few ounces of liquid blood and a well-marked excoriation. The resemblance to irritant poisoning was great, but the position of the patient made that impossible. The author, who had seen much of cholera during the epidemics of 1886, was struck with the remarkable resemblance to the collapse stage of cholera. H. HANDFORD, M.D.

2358. *Lannelongue on Intracranial Dermoid Cysts.*—Professor Lannelongue has lately met with a case of intracranial dermoid cyst, from which he concludes that the opinion of Lebert—who regards these cysts as the result of heteroplasty—is erroneous. These formations occupy exclusively the cerebral fossæ, and are usually situated in the angle formed by the tentorium of the cerebellum and the dura mater of the cerebral fossæ. The cyst consists of a median symmetrical tumour, encased between the occipital and the dura mater, or between the dura mater and the nerve-substance. In developing, it pushes forward the two lobes of the cerebellum, which becomes compressed, atrophied, and wasted. The compression is also exercised on the protuberance, the medulla oblongata, and even the medulla itself, on certain vessels, on the cranial sinuses, and the encephalic veins. Dropsy, cerebral or cerebellar œdema, and even hydrocephalic result. The cystic wall is generally thin, and adheres to the dura mater. The contents consist of epithelial and sebaceous masses, disposed in stratified layers against the wall, with collections of hair. The signs are in no way pathognomonic. The diagnosis must be drawn from the class of symptoms and the particular form in which the accidents evolve. The following case throws a complete light on the pathological anatomy and the pathogeny of intracranial dermoid cysts. From the wall of the cyst to the point at which it became lost in the dura mater a fibrous ligament proceeded, and entered the occipital by a little bony canal with rounded edges, which was directed from below to above. Between the scalp and the skull, a small pedicle—which proceeded in a downward direction and entered the occipital—was detected. Although these two pedicles were not in complete continuity, their similar transformation and the identical direction of their path showed that they were two portions of the same track, which had become separated by the development of the skull. This observation proves that notwithstanding the presence of a thick bony layer between the wall of the cyst and the tegument, these two parts are connected with each other by a fibrous bundle, which denotes that a portion of the skin of the cranium is wedged during intra-uterine existence. Verneuil's proposition may therefore be extended, and the following law established :—Every dermoid cyst results from the wedging or the persistence of the ectoderm proceeding from an embryonic fissure. M. Lannelongue explains the fact that these cysts are situated exclusively in the posterior fossæ of the cranium by the presence of a tegumentary crease in the depressions which exist in the cerebral vesicules. The islet formed by this crease, which becomes subsequently a cyst, is interposed between the anterior and posterior brain. The only rational treatment of intracranial dermoid cysts is (according to this author) trephining, followed by extirpation of the tumour. W. VIGNAL.

2359. *Bruce Clarke on Gangrene after Typhoid Fever.*—In the *Illustrated Med. News*, September 1889, p. 301, Mr. Bruce Blarke records the case of a girl, aged 13, who was a patient at the hospital in December 1887. She had suffered from typhoid fever about four weeks before admission, but when seen by the author her leg was in a condition of gangrene as far as the middle of the calf. She was extremely wasted, and weighed just 42 lbs. It was decided to perform amputation in the middle of the thigh, as the limb seemed extremely cold. There was very little bleeding during the operation, and very few vessels required to be tied. On examining the leg after removal, the femoral and popliteal arteries were dissected down to where the anterior tibial is given off. The artery was plugged all the way, the plug was not adherent to its wall, and extended into the popliteal artery, but the anterior and posterior tibials below the popliteal were quite pervious. On making a section of the artery and examining it microscopically, it was found to be perfectly healthy, excepting that it was seen to bulge a little at one side, and there was also a thickening of the intima. The internal elastic lamina was gone at the spot where the bulging took place. The attack of gangrene was evidently not due to arteritis, but rather to a coagulation which had taken place spontaneously in the vessels, and which had led to some slight subsequent change in the wall of the artery.

2360. *Godlee on a Few Cases of Meningocele.*—In the *Illustrated Medical News*, October 1889, p. 73, Mr. Godlee contributes an able article on pulsating tumours of the head, and gives plates illustrating four cases of meningocele occurring in or near the region of the occipital bone. Of pulsating tumours not communicating with the interior of the skull, the most common are arterial nævus and aneurism by anastomosis or malignant growths. These all possess a pulsation synchronous with the heart's beat, but practically an imperceptible degree of pulsation synchronous with the respiration. A nævus may generally be diagnosed from its flatness and fleshy feel; it is movable over the skull, and on making deep pressure the bone can be felt to be imperforate beneath it. The pulsation in an aneurism by anastomosis is usually almost completely stopped by making pressure on the artery in the course of which it will almost certainly be found; and, again, an aneurism by anastomosis is generally lateral, while a meningocele always occurs in the middle line. A soft malignant growth is usually easily diagnosed on account of the age of the patient, the shape and solidity of the tumour, the pain and presence of other growths being generally sufficient to warrant a correct diagnosis. Of those which communicate with the interior of the skull, all are not meningoceles and encephaloceles. They may be tumours, which have, as it were, accidentally developed a communication with the cranial cavity, either as the result of their having infiltrated the cranial bones, or because they have caused an absorption of them by pressure. These may spring from the inside or from the outside, but they almost all possess the characteristic pulsation spoken of previously. In exaggerated cases of hydrocephalus the fontanelles and sutures and other soft spots become so prominent as almost to merit the name of tumours. It must not be assumed that all meningoceles and encephaloceles pulsate, or that the pulsation, if present, is very obvious. If the communication with the cranial cavity be small, and the walls of the tumour thick, pulsation may be absent or scarcely perceptible. These non-pulsating meningoceles, especially if they occur in unlikely situations, have sometimes been dealt with by the surgeon under the impression that they are cases of simple tumour. In one case an attempt was made to remove a meningocele projecting into the nasal fossa through the cribriform plate of the ethmoid, it having been mistaken for a polypus of the nose. Dermoid cysts in this situation are fortunately very rare, and are very difficult to diagnose. In cases of meningocele and encephalocele there is always some amount of bony deficiency to allow of the passage of the hernia, and the most usual situation is the occipital, behind the foramen magnum, at the point where the lines separating the four centres of the tubular part join. But the opening may occur at any part of the skull—at the root of the nose, in the interior of the nose or pharynx, at any of the fontanelles, or at any membranous part which has yielded to pressure.

2361. *Albert on Successive Eruption of Supernumerary Teeth from a Bony Tumour of the Upper Jaw.*—In the *Illustrated Medical News*, August 1889, p. 125, Mr. Albert records the case of a schoolboy, aged 14, who came to him on account of a swelling in the upper jaw, which had been growing for some months. It was about the size of a marble, perfectly hard, and covered by healthy gum, situated over the canine and first bicuspid teeth of the left side. In the centre of the tumour was a hard shiny mass, which proved to be an erupting supernumerary tooth which, after a fortnight, was extracted. It was very small, and looked exactly like a canine tooth in miniature. After an interval of another fortnight the boy came again with another tooth, appearing from the tumour, in shape tricuspid. Three weeks later another miniature tricuspid showed itself, and was removed; whilst doing so a small piece of hard substance, resembling enamel, fell from the wound. Three weeks later he was again seen by the author, the wound had healed, and there were no signs of any fresh development; the boy, however, stated that he had erupted a tooth during the time but had lost it. Some months later he was again seen, and though there were no more erupting teeth, the swelling had not lessened in size.

Richard Neale, M.D.

2362. *Atkins on the Morbid Histology of the Nervous System in Chronic Alcoholism.*—Dr. Atkins believes it is now admitted that the long-continued excessive use of alcohol produces demonstrable structural changes, though there is not agreement as to the manner in which these changes are induced. Unquestionably grave functional disturbances are the result of intemperance, which apparently have left no remanents in the shape of pathological findings; but this cannot be taken as evidence that alcohol is incapable of producing appreciable changes in structure. As with other poisons, some individuals can resist the effects of alcohol better than others, but with the majority it is not so. Destructive changes are produced, so complicated with others from different causes, as to render it difficult to discriminate between cause, and effect. Syphilitic conditions of the nervous system are frequently characterised by changes similar to those found in chronic alcoholism. Dr. Atkins had an opportunity of demonstrating the histological changes in brain-structure in a male patient, with good heredity, who, after ten years' habitual intemperance, died at 30. After several attacks of delirium tremens, melancholia dementia and epileptic convulsions set in. Nuclei, occasionally aggregated into foci, were present in the brain substance. In some cases there were also atrophic alterations in the motor cells of the spinal cord. The atrophy was due, not directly to alcohol, but to the prolonged inertia from the physical and mental breakdown. These changes were more frequently met with in the brain of chronic inebriates than in those who succumbed to acute alcoholic affections.

Norman Kerr, M.D.

PHYSIOLOGY.

RECENT PAPERS.

2363. MOSSO AND RONDELLI.—On the Behaviour of Air respired at very High Temperatures. (*Gazz. degli Ospitali*, March 31, 1889.)

2364. D'ADUCCO.—On the Action of Light on the Duration of Life, Loss of Weight, Temperature, and Quantity of Hepatic and Muscular Glycogen in Fasting Pigeons. (*Gazz. degli Ospitali*, April 10, 1889.)

2365. GAGLIO, PROF.—On the Innervation of the Heart. (*Gazz. degli Ospitali*, May 15, 1889.)

2366. HUCHARD, DR.—On Embryocardia. (*Rev. Gén. de Clin. et de Thérap.*, May 2, 1889.)

ART. 2363. *Mosso and Rondelli on the Behaviour of Air respired at very High Temperatures.*—This paper was read before the Royal Academy of Turin, March 15, 1889. The authors in their experiments made use of Weigert's apparatus, proposed as a new method of treatment for phthisis. In the first place, they determined at what temperature the air enters the lungs. This they did by making an opening in the trachea of a dog, and placing in it a thermometer. They found that while the dog was breathing air at 180°, the temperature of the air in the trachea was always below the temperature of the rectum by half a degree. To explain this fact they contrived a very simple apparatus, consisting of two glass funnels, one inverted in the other, and between the two a piece of wet gauze is stretched. Now, if very hot air is driven into the lower funnel, it is found that the air in the upper funnel never exceeds 22° C., because the evaporation which takes place from the wet gauze absorbs all the caloric from the air. The same thing occurs when hot air is inhaled, the evaporation from the mouth, fauces, and trachea consumes all its caloric, and the air arrives at the lung at a lower temperature than that of the blood. This is also proved by the fact that the expired air is no hotter than when only the ambient air is breathed, and not, as Weigert believes, at a temperature of over 45°. The following are the conclusions of their experiments:—1. A current of air at 180° to 200° C. is immediately cooled in passing through wet gauze. 2. The temperature of the air in the bronchi and in the trachea immediately below the larynx and fauces is never greater than that of the rectum; it is even less by half a degree. 3. Respiring hot air at 180°, the air expired is of the same temperature as when air at 18° is respired. 4. Breathing hot air at 160° to 180°, less watery vapour is eliminated than when breathing the ambient air at 12°. 5. The respiratory movements become deeper and somewhat more frequent when hot air is breathed. 6. While under ordinary conditions the air expired is heated at the expense of the blood, and the arterial blood in the carotid is of lower temperature than that of the internal organs, during the respiration of hot air the expired air is heated by the heat of Weigert's apparatus. Professor Bozzolo, speaking after the paper, pointed out the importance of these experiments. They proved that Weigert's apparatus did not serve the end desired, and that hence the cures obtained by De Renzi and others must probably be attributed to some other causes.

2364. *D'Aducco on the Action of Light on the Duration of Life, Loss of Weight, Temperature, and Quantity of Hepatic and Muscular Glycogen in Fasting Pigeons.*—When pigeons are given no food, and kept in a situation exposed to the light, they die on the 14th or 15th day; if kept in the dark, they survive till the 24th day. When kept exposed to light, they die after having lost from 40 to 45 per cent. of their weight; if kept in the dark, 50 to 51 per cent. Exposed to light, their temperature remains till the last day or so at from 39° to 41°; but, if kept in the dark, after the 7th or 8th day there is a marked fall of temperature, perhaps to 36° C.; for the last 15 days their temperature may be from 3° to 5° C. below the normal. Again, when kept in the light, the hepatic glycogen disappears on the 2nd day; the muscular glycogen only disappears when the temperature falls much below normal. If kept in the dark, hepatic glycogen is still found on the 13th to the 15th day of fasting, and in the muscles traces are still found on the 21st day. These facts show that light has great importance in tissue change. Moleschott and Platten, &c., have shown that in animals kept in the light, the elimination of CO_2, and the loss of weight is greater than in animals kept in the dark. The experiments of D'Aducco support this opinion, that the energy of vital phenomena is greatly under the influence of light.

2365. *Gaglio on the Innervation of the Heart.*—In a paper read before the Medical Chirurgical Society, of Bologna, Prof. Gaglio touched on a point of much practical interest. Paralysis of the heart, as is well known, constitutes the chief danger in the administration of chloroform. Prof. Gaglio has found that atropin prevents this stoppage of the heart. The administration of chloroform may be carried to complete arrest of the respiration, and yet the heart continues to beat and the life of the animal may be preserved. Albertoni for many years in the laboratory has given injections of atropin before administering chloroform to dogs, and Prof. Caselli and other surgeons have employed it in their hospital practice with advantage.

G. D'ARCY ADAMS, M.D.

2366. *Huchard on Embryocardia.*—In a communication read before the French *Société Médicale des Hôpitaux*, the author insists upon the symptomatic value of the presence of the 'fœtal rhythm' of the heart, to which he has given the name of embryocardia. It is generally indicative of approaching dissolution, and consists of—1. An acceleration of the heart-beat (tachycardia). 2. An equalisation—*i.e.* a tendency to an equal duration, of both pauses. 3. A similarity in the tone and intensity of both sounds. It differs materially both in nature and significance from simple tachycardia, and there is no material relationship between the two. The anatomical causes of this condition are—1. more or less advanced degeneration of the myocardium; and 2. extreme enfeeblement of arterial tension. These two conditions are especially to be noted in typhoid fever; hence the frequency with which embryocardia is remarked in the course of severe typhoid, but it is also met with in scarlatina, pneumonia, diphtheria, and generally in cachexia from any cause, and at the later stages of asystole. It is generally the forerunner of collapse, and is always a sign of grave import. The treatment of this condition comprises two indications. 1. To increase the contractile force of the heart; and, 2, to increase arterial tension. Digitalis, however, is rather injurious than otherwise, and the best means of increasing the strength of the heart-beat is by the subcutaneous injection of caffein, while arterial tension is best augmented by hypodermic injections of ergotin or ergotinine. ALFRED S. GUBB.

DISEASES OF CHILDREN.

RECENT PAPERS.

2367. SZONTAGH.—On a Case of White Syphilitic Pneumonia in a Boy Five Years Old. (*Jahrbuch für Kinderheilkunde*, Band xxviii., Heft 2.)

2368. SZONTAGH.—On a Case of Croupous Pneumonia with Intermittent Type of Fever. (*Archiv für Kinderheilkunde*, Band xi., Heft 2.)

2369. JACOBI, M. P.—On Cirrhosis of Liver in a Child. (*Archives of Pediatrics*, vol. vi., No. 5.)

2370. BELLAMY.—A Unique Case of Nævus. (*Illustrated Med. News*, October 1889, p. 32.)

ART. 2367. *Szontagh on a Case of White Syphilitic Pneumonia in a Boy Five Years Old.*—The patient, who was well nourished, was admitted to the Stefanie Hospital on Oct. 31, 1887, with diphtheria of the fauces and larynx. The next day two condylomata were noticed on the anus. The laryngeal stenosis was less severe and disappeared *pari passu* with the condylomata on Nov. 15. There was no pyrexia up to this date except on the day of admission when it was 102°. On the 16th, however, the temperature again rose owing to the supervention of scarlatina. On the 18th the temperature morning and evening was 104·9, and complaint was made of violent pain on the left side. There were dulness and bronchial breathing behind on this side from the fourth space downwards. On the four following days the temperature fluctuated between 102° and 104°; the exanthema altered very little. The strength, however, gradually gave way, and, notwithstanding stimulants, death ensued on the evening of Nov. 22. The autopsy was made by Professor Hutyra who found the following condition of the lungs:—The upper and middle lobes and the upper half of the lower lobe of the right lung contained a moderate quantity of blood and were infiltrated with frothy serum. The lower half of the inferior lobe was dense and almost free from air; on section, it was brownish-red in colour. In the left pleural cavity was about a litre of yellowish fibrinous fluid. The upper lobe of the left lung was small, shrunken, and dense, and contained little or no air; on section, it was intensely grey in colour and homogeneous. The lower lobe was covered with thick pseudo-membranes and was unaltered in size, dense and airless. On section, it showed on a pale reddish grey homogeneous basis, numerous, greatly thickened, shiny, white-walled bronchi and blood-vessels. Diagnosis: white syphilitic pneumonia of lower lobe of left lung; left pleuritic effusion with almost complete compression of upper lobe of left lung; partial right pleuritis; lobular pneumonia of lower lobe of right lung; fatty kidneys. The author, in summing up, considers that the affection of the left lung probably dated from a time long before the patient's admission to the hospital, although very improbably going so far back as the period of birth. The only information obtained from the mother was that the child had been repeatedly treated for eruptions of the skin and had had a cough ever since he was one year old.

2368. *Szontagh on a Case of Croupous Pneumonia with Intermittent Type of Fever.*—The patient was a boy, 6 years of age. He first became feverish on Feb. 23, and was seen the next day. A careful examination was made, but nothing definite could be made out. He appeared lively, and complained of no pain. There was, however, a slight cough, and the temperature was nearly 101° in the morning, and by the evening it had risen to 105°. He was again seen the next morning, and the temperature was normal. The cough was more violent, and the patient was somewhat dull. There was no enlargement of the spleen, and the only physical sign was a little dry rhonchus; during the afternoon the temperature rose rapidly, and by three o'clock was 106°·8 (rectum). Two separate grains of antipyrin were then given, with an interval of one hour between, but the thermometer indicated 105°, and, three hours after, had risen to 106°·5. The next morning the temperature was again normal; and early in the day a large dose of quinine was given, notwithstanding which the temperature at two o'clock was 106°·5; antipyrin was again given, but at 8 P.M. there was a reduction of 0°·35 only. On physical examination, dulness with bronchial breathing was found over the lower lobe of the left lung. For the next three days the morning temperature was subnormal, and the evening temperature over 106°. The treatment consisted exclusively of the administration of brandy and a little opium without antipyretics. On the morning of the seventh day the patient was evidently much better; the temperature was 96·°8, and it did not rise beyond the normal point; the physical signs were those of resolution.

2369. *Jacobi on Cirrhosis of Liver in a Child.*—The patient was a girl, 10 years of age. When examined in November 1884, the abdomen was prominent, the spleen reached to the umbilicus and was indolent to palpation, and the left lobe of the liver was enlarged. A month previously there had been slight jaundice, but this had disappeared after the administration of a grey powder. The history of the case for the next few months consisted of repeated attacks of jaundice with occasional pyrexia. The general health did not suffer much. On July 1 the fever (remittent) returned and ascites set in. In October the ascites had disappeared, and both liver and spleen were smaller. In February following, the liver was smaller and the spleen the same, and this condition has remained unchanged since. She has been seen occasionally, but although she has had gastric catarrh at times, there have been no attacks of jaundice or fever until last October, when she had an attack of intermittent fever lasting two weeks. The treatment consisted in the administration of iron, quinine, and iodide of potassium, the latter to the extent of one dram daily.

RALPH W. LEFTWICH, M.D.

2370. *Bellamy on a Unique Case of Nævus.*—In the *Illustrated Med. News*, October 1889, p. 32, Mr. Bellamy contributes an article with an illustration of a unique case of nævus. A large nævus occupied the left side of the child's face and upper lip, covering the mouth entirely, and was rapidly increasing, so that it was evident that the child must die if nothing were done. Permission was given to the author to try and cure it, and he therefore placed the child under ether, and tied the afferent and efferent vessels of the mass, with the effect of almost immediately causing coagulation of the growth. The object of this was to convert the mass into an abscess, and to open it and treat it on ordinary principles when suppuration took place. The child, however, died a few hours after the operation, possibly from exhaustion, though little or no hæmorrhage occurred during the operation. If the case had been operated upon earlier there might have been some chance of success, as the author once successfully operated on a similar case, but before the nævus had increased to such a size. RICHARD NEALE, M.D.

REVIEWS.

ARTICLE 2371.

A Contribution to the Surgery of the Spinal Cord. By WILLIAM THORBURN, M.D., F.R.C.S. London: Charles Griffin & Co. 1889.

THIS work is more than its title implies, and is a record of what is known of spinal surgery. Since the discoveries of Ferrier, Hitzig, Yeo, and others on the localisation of cerebral functions, and the consequent advances in cerebral surgery by the aid of modern methods of wound dressing and antisepsis, it was to be expected that attention would be given to spinal physiology and surgery. Here, again, Ferrier and Yeo have led the way by experiments on the functions of the spinal nerve-roots, and Horsley and Gowers in this country have applied to practical purposes the knowledge obtained. But in the present volume Mr. Thorburn adds from a specially large field of natural experiment which a manufacturing centre, with its accidents, affords, a number of clinical cases of injury and disease which will help in clearing our knowledge of this rather obscure subject. The papers are not, however, limited to the narration of cases in support of what is already known, but the author examines carefully the conclusions arrived at by physiologists and anatomists, and submits tables of the motor and sensory areas affected by injury to the different nerves as his own cases and those recorded by others seem to indicate. Each region of the cord below the third and fourth cervical is taken in turn, and illustrative cases of injury are given and remarked upon. And good illustrations of the peculiar positions of the limbs and of the areas affected by paralysis of certain nerve-roots accompany these chapters, and these will prove very useful to the surgeon.

A chapter which will naturally attract attention is that on the 'indications for operative treatment in affections of the spinal cord,' and here we find that his conclusions, drawn from fifty-six cases of operation by various surgeons, and those chiefly of modern experience, are (1) that fracture or dislocation of the spine cannot be remedied without operation; (2) that operation is not necessarily fatal or so dangerous as to be unjustifiable; (3) that if successful it would not be likely to leave the spinal column too weak to mechanically perform its functions; (4) that in a certain though limited class of cases operation holds out a prospect of benefit to the patient. Without question any extensive crush to the cord is irreparable, and therefore in cases of complete dislocation of the body of a vertebra, no good can be done when the injury is in the cervical or dorsal region, but when the cauda equina is the part affected by a crush there is every hope of doing good by operation, or again, when a lamina is depressed. And in caries of the spine, operation should be performed when there is progressive paralysis without improvement after careful waiting, and in these cases it is often possible to remove some cause of pressure in the cicatricial tissue. New growths, too, demand removal, and the brilliant results of Mr. Horsley and others are still fresh in the minds of surgeons.

The effects of railway injury on the spine are discussed, and many of the symptoms are looked upon as due to traumatic hysteria. The author traces the alliance between these cases and what is known of hypnotism, and the parallel is in many respects marked. The ophthalmoscopic appearances in spinal injury are not very definite, but these are also discussed.

Mr. Thorburn may be congratulated on the production of a very original and useful contribution to the surgery of the spinal cord, and we shall look with interest for its extension.

W. W. WAGSTAFFE.

ARTICLE 2372.

Handbook of Hospital Practice and Physical Diagnosis. By CHRISTOPHER J. NIXON, M.D. 1889. J. & A. Churchill.

A NEW field has been here opened in the domain of medical literature, and by an author who is specially fitted by experience to undertake it. This handbook is intended as a guide for students on their commencing clinical medical work at the hospitals, to lead them to examine systematically the different organs and to point out to them the value of signs which have a physical basis—to be, in fact, a scientific guide in the observation of cases which are brought before their notice. Dr. Nixon has found, as an examiner at the Irish Conjoint Board and at the King and Queen's College of Physicians, that students have failed largely in a practical knowledge of the elementary principles of observation, and the examining boards, recognising this, have introduced into the examination held at the end of the second year of study the subject of hospital practice, including methods of physical diagnosis, application of urinary tests, as well as the principles of elementary minor surgery. It is to meet some of these requirements that this book is issued, and a more advanced work on the physical signs of diseases affecting the nervous system, the larynx, and the blood (which are not included in this book) is promised at a future period.

The idea is, no doubt, a useful and practical one, but we feel that the title of the work before us is faulty. It is not 'a handbook of hospital practice and physical diagnosis,' but is simply limited to one branch of a student's professional work—the medical—and does not include all this, so that anyone purchasing the work for the object of learning what it professes to teach would be disappointed. But of the medical practice and physical diagnosis in medical cases the accounts here given are generally excellent, and the instruction clear and just what a student will find of service. Moreover, we find at the end a good glossary of medical terms, which, for a student who does not possess or often refer to a medical vocabulary, will prove valuable.

The first chapter draws attention to the 'facies of disease,' type of constitution, decubitus, temperature, pulse, tongue, skin, subcutaneous tissue, and appetite. Then follow chapters on physical examination of the respiratory organs, palpation, percussion, and auscultation of the lungs, examination of the sputum. Then physical examination of the organs of circulation, palpation, percussion, and auscultation of the heart. Then examination of the abdomen, the urine, and other excreta. The anatomical relations of organs to the surface are detailed and attention drawn to what can be noticed by simple inspection before examining by the hand or stethoscope. The meaning of the different sounds heard or things seen is given, and the peculiarity of these in different diseases tabulated clearly, and, moreover, a short and admirable epitome of the physical signs of many diseases is to be found in each chapter, and we cannot help noticing that the intention of the author is to make his instruction very systematic and orderly, such as a student will be thankful for. The teaching represents a form which is found in perfection in some of the most successful younger clinical teachers in the hospital wards.

We have spoken in high terms of the style of the teaching contained in this work, and though every teacher will be inclined to lay particular stress upon special signs of disease for diagnosis, we think the author has given these with judgment and clearness. But we may notice what may be looked upon as omissions from a work intended to make students observe carefully. Such a work should contain instructions of a much more practical character, as to how he should examine the regions and parts under notice, and not be content with the signs found; how to examine without danger to the patient or unnecessary exposure; how to get the outlines depicted of transverse sections of the chest; how to use the different kinds of instruments such as stethoscopes, &c., and what difficulties they may make when improperly used; how to examine the urine and not merely what can be found, &c. We should have been glad to see more instructive outline diagrams for the use of students, and advice encouraging the sketching of peculiarities and morbid conditions. We do not find any reference to the appearance of the skin in typhus, nor of the very similar appearance after flea-bites, nor to the colouring of the skin in the early states of some neurotic affections. We feel, too, that directions how to mark on the surface the areas of dulness, &c., and how to measure best, and such-like simple methods of observing and recording, would be useful to the student.

As we have indicated above, the instruction given is clear, systematic, and good, and it is an advantage to have such a work undertaken by a teacher of experience; but we think the title too general, and that this is only a limited portion of 'hospital practice and physical diagnosis,' which should be called 'Medical, Part I.,' and be supplemented by an equally good handbook on the surgical aspect of the subject. The diagrams and figures would bear extension, and the printing is not so well marked and strengthened by differences of type as might be expected.

ARTICLE 2373.

Archives of Surgery. Nos. 1 and 2. By JONATHAN HUTCHINSON, F.R.S.

THE profession will always welcome any records from Mr. Hutchinson, for there are few observers and writers whose work is so thorough and whose reasoning so judicious. One great charm of his papers is that they set the reader thinking, and perhaps all the more so when his views differ somewhat from those held by other surgeons of experience; since all recognise the great value of the records which his untiring industry and large experience afford to the profession. The *Archives of Surgery* are his last production, and are due to his anxiety to make good use of the large store of clinical material which he has collected, and which would otherwise share the fate of so much that is only buried with the surgeon in his brain, or destroyed with the refuse and notes which his successors do not understand or value. There are probably few surgeons who have been such careful note-takers and thorough recorders as Mr. Hutchinson, and we should be sorry not to benefit by his work in every possible way. The example he has set of thoroughness [in reporting, and the systematic use of his material, may influence younger surgeons; and unless such habits are begun in early life they can hardly be grafted on in the later stages of professional existence.

But while admiring the contents of the new publication, we are inclined to regret the title given to it. It contains, and is intended to contain, only Mr. Hutchinson's own papers, 'with but very few exceptions,' which do not yet appear. If the term 'archives' is used at all, it would be only right to call the publication 'Hutchinson's Archives'; and though the papers are mainly surgical, they are by no means all so; we, however, recognise the difficulty of finding the border line between surgery and medicine. Moreover, the term 'archives' applies to documents and papers and their storehouse, and is, we think, more suitable to somewhat antique records, and those not of one individual. These *Archives of Surgery* are the work of one man, and are not antique, and are not simply surgical.

But, while we quarrel with the title, we are heartily glad to see the work. It is proposed to issue it quarterly, and to complete it in the course of about three years, and the illustrations which accompany the numbers will be about four for each, so that the volumes will be attractive in this respect. It is likely also to be attractive in other ways, for its scope is wide, and the papers are neither long nor heavy, but written in the author's easy style. They are likewise sufficiently varied to make each number so far published pleasant as well as useful reading to the medical practitioner or advanced student. No particular order is followed, but short papers are grouped together on allied subjects, and there are some new features of interest in the very original and useful papers. Mr. Hutchinson naturally draws from a large and perhaps unequalled store of experience in particular fields of work, and we are, therefore, not surprised to find some of his most valuable papers relate to the skin, to the eye, and to syphilis, but they are by no means limited to these subjects. The first paper is on intestinal obstruction, and is an impressive appeal in favour of manipulation under anæsthetics, and of mechanical attempts at replacement by inverting the patient, and by succussion instead of by laparotomy. A case of acromegaly, three fatal cases of gangrene after vaccination, and a case of eruption caused by chloral will be found instructive, and there are papers on cures, schemata of treatment, general therapeutics, miscellaneous memoranda, quotations, and notices.

What will interest thoughtful students and practitioners is a paper on the canons of surgery, established rules for guidance in certain cases. The subjects here, too, are taken without any definite order, for those already considered are the choice of an anæsthetic, excision of the eyeball after injuries, the treatment of compound dislocations, and early operations in cancer. The example of what the author means by canon is best given by the final words in the first subject chosen :—'Never give chloroform alone in the first instance; let it be either preceded by ether or by mixture with it.' The wording of this canon does not do justice to the author's usual clearness. Another attractive paper for advanced students and young practitioners is the catechism of surgery, with cases for diagnosis. This is, apparently, to be continued in each number, and will prove very useful where it is intended. Questions are put on a variety of subjects, chiefly surgical, and should be answered without referring to the solutions given at the end of each set by the author himself. They are generally very practical, and represent the author's opinions, with which we should not generally be inclined to differ or find fault, but they cannot be looked upon as complete, as, for instance, when the symptoms of fracture of the base of the skull do not include any reference to the escape of cerebro-spinal fluid, and some of the views expressed are peculiarly the author's own. The catechisms are short, and consist of about eight to ten questions on the different subjects, and these are very various, as will be seen by the list of those already taken—the sources of vaccine lymph, the uses and abuses of splints, the diseases of arteries, amputations, concussion of the brain, hæmorrhoids, conical stumps, cases of choroido-retinitis, neglected eczema, Menière's disease, advancing detachment of the retina, the gall-bladder and gall-stones, spina bifida, mumps, cases of ruptured urethra, occlusion of the principal arteries of the head, bursal tumour of the popliteal space, and syphilitic keratitis. The plates are good, and so far illustrate various morbid conditions of the skin. One is glad that they are incorporated in the different numbers, and are not issued as a separate atlas. We hope the author will have them placed with their appropriate papers when the work is finally issued in bound volumes and not in a separate atlas, as he seems to be inclined to do. It is always a drawback to the usefulness of a work when the plates are in a separate volume, and a good general index will always enable the reader to find them—especially if some indication by an asterisk or otherwise shows the subject is illustrated at the particular page.

We cannot complete this notice without congratulating the author upon his work as far as it has gone, and upon the example he has set in making the reader think for himself, which is the stepping-stone to that 'wisdom which dwells in minds attentive to their own.' W. W. WAGSTAFFE.

ARTICLE 2374.

The Electric Illumination of the Bladder and Urethra. By E. HURRY FENWICK, F.R.C.S. Second Edition. London: J. & A. Churchill. 1889.

THIS work is now recognised as an important addition to English literature, and its second edition will be welcomed by the profession. That Mr. Fenwick has already done good service in bringing forward the means of examining the interior of the bladder by the aid of the electric light must be cordially allowed, and we have in this work an excellent and we believe the only English book which is devoted to the subject. It is possible that a large field is opened by this comparatively new departure in surgery; whether its use will remain limited to an experienced few remains to be seen. We feel that other questions besides purely surgical ones will be advanced by the use of this instrument, and we look forward to its application to other cavities besides the vesical and urethral.

In the present edition the clinical part has been entirely rewritten and much enlarged, and the author's experience of the application of his ingenious method of modelling and copying what he sees with the cystoscope is admirably illustrated. To determine that this plan is positively reliable we should be glad to see photographs of the model and of the *post mortem* appearances, in some case for comparison. One example of this is given in figs. 26 and 36, but here was enough lapse of time between the death and the modelling to allow of considerable extension of the disease. Mr. Fenwick has not yet been able to satisfy himself of the value of any combination of washing-out apparatus with the cystoscope, as the tube used is so fine that it gets clogged easily; but we would ask whether it is necessary to have the tube so fine.

The volume is a handsome one, excellently illustrated and printed, and the most recent papers of the author have been incorporated with the earlier work, so that it forms a valuable monograph on a most interesting and important subject.

W. W. WAGSTAFFE.

ARTICLE 2375.

An Introduction to Chemical Science. By R. P. WILLIAMS, A.M. Edited and revised by B. P. LASCELLES, M.A., F.C.S. London: Ginn & Co. 1889.

THIS work appears to fulfil very well the purpose of the editor, viz., to give 'a manual intermediate between the Natural Philosophy Primer and the minute and detailed text-book.'

There are, of course, a few minor points which are open to animadversion; but in mentioning these it must be understood that there is no intention to throw doubt upon the excellence of the work as a whole.

It may be doubted, for example, whether it would not have been wiser to have given some account of the element Antimony; if, for no other reason, in order that, at all events, its reactions might be compared with those of arsenic. There is an excellent account of Marsh's test for arsenic, with special reference to the toxicological use of the method—an account the perfection of which is marred by the absence of any directions for distinguishing the reactions given by arsenic from those yielded by the allied element Antimony. From a toxicological point of view, the importance of such distinctions is enormous, since tartar emetic is sometimes given in cases of suspected poisoning in order to evacuate the stomach.

Again, for purely chemical reasons, it would seem advisable to give some account of the salts of barium, since the solutions of two of its compounds —the nitrate and the chloride—are found upon the shelves of every chemical laboratory, as indispensable reagents. In enumerating the reasons for concluding that atmospheric air contains nitrogen and oxygen in a state of mechanical admixture (*vide* p. 97), one of the most important considerations is not mentioned, viz., that the proportions by weight in which these gases are found in the air are not represented by any simple multiple of the combining weights of the two elements.

On the whole, the book is well and correctly printed. The bottle, in fig. 12 on p. 28, should be inverted, as correctly described in the text. Also, on p. 119, line 16, 'vapour' should be 'vapour density.'

Mr. Lascelles is to be congratulated on having produced a volume of convenient size, readable, well illustrated, and provided with numerous theoretical and experimental exercises, which is clearly the outcome of considerable experience in teaching chemical science. It offers to the student a sound and practical groundwork or introduction to the study of chemistry, such as is likely to awake his dormant interests in the science, without alarming him by a too formidable array of details.

G. Stillingfleet Johnson.

Article 2376.

The Past and Present Provision for the Insane Poor in Yorkshire, with Suggestions for the Future Provision for this Class. Read at the Leeds Meeting of the British Medical Association. By D. Hack Tuke, M.D., F.R.C.P., LL.D. London: J. & A. Churchill. 1889.

Dr. Hack Tuke takes a legitimate pride in recalling that in the difficult work of beginning a proper provision for the insane in Yorkshire his own ancestors have played a noteworthy part. The treatise under review is dedicated to Godfrey Higgins, the learned author of the *Anacalypsis*, and Samuel Tuke, of York, to whose exertions the erection of the first county asylum in Yorkshire was mainly due. The Lunatic Asylum at York was opened in 1777. A year after it only counted fifteen patients. In thirty-two years these had increased tenfold. The population of Yorkshire in 1809 was nearly a million. In those times there was a large number of dements and idiots living with their friends or detained in poor-houses or jails, and those wretched beings were much neglected and sometimes treated with scandalous cruelty. 'To us,' observes Dr. Tuke, 'it sounds as incredible that there were only 750 pauper lunatics in Yorkshire in 1815, as it then seemed incredible to Yorkshiremen that there could be so many. Taking this estimate, the proportion to the population of the county would be 1 in 1,300, whereas now it is one in 560.'

The Wakefield Asylum was opened in November, 1818, to accommodate 150 patients. It now contains 1,350. The population of the West Riding, which at the beginning of this century was little more than half a million, is estimated at the present time to be two-and-a-half millions. Dr. Tuke thinks that Yorkshire, like Lancashire, ought to have its own pauper idiot institution. Some observations of Dr. Tuke at the close of his historical survey are worthy of deep attention. After having stated his belief that the insane poor are now well housed and fed, kindly treated, and placed under medical care in admirably managed institutions, the author observes: 'But while we rejoice in this great and beneficent result, I cannot conceal from myself the fact that the pioneers in this work entertained hopes which, if they could be with us to-day, they would sorrowfully admit had never been realised. I am sure they would say that they fully expected a large proportion of the insane under the reformed treatment to be permanently cured of their malady, and never for an instant supposed that of those who should recover a frightful proportion would relapse, and that, seventy years after the opening of the first pauper asylum in Yorkshire, there would be five large county and one borough asylum in addition to that at York. I venture to say that had it been possible for them to have foreseen this, their astonishment and dismay would have been great indeed; and were they present at this moment, it would seriously temper the satisfaction they might justly experience in witnessing the success of their humane labours.'

Turning to the future, one might hope that a steady and increased attention to therapeutics and coming discoveries in the pathology and treatment of insanity may lead physicians to have a higher percentage of recoveries, and we have great hopes that this will be actually attained. Dr. Tuke contents himself with considering in what way provision for the accommodation of the insane poor will be carried on in the future. He observes that the boarding-out system has been tried in Yorkshire and not found to answer, but that it is sometimes expedient to give out-door relief to lunatic paupers in the homes of their relations. Like almost everyone who has considered the subject, he condemns the capitation grant of four shillings a week as tending to crowd chronic cases into asylums which would otherwise have been left in workhouses. One of the most striking and useful passages in Dr. Tuke's treatise is his exposure of the fascinating fallacy that much of the want of success in the treatment of insane patients is owing to the cases not being subjected to asylum treatment while they were in the early and curable stage. To this effect he quotes a passage from Dr. Major's annual reports: 'I am constrained to express my opinion that in the large majority of the unfavourable cases admitted, the unhopeful prospect has been due, not to want of recourse to early treatment, but, so to speak, to inherent unfavourableness determined from the very outset of the mental symptoms. Experience soon shows how numerous are the cases admitted into any asylum, in which insanity is given (and so far as can be ascertained correctly given) as being of recent date, and yet in which but little or no hope of recovery can be ascertained.' Dr. Tuke at the same time takes care to observe that the reckless manner in which this assertion has often been made 'does not by any means disprove what has been very properly insisted upon, and by no one more strongly than myself, that prompt and judicious treatment in the early stage of mental disease will prove successful in some cases, which if they remained at home and received no special medical treatment, would go from bad to worse, and lapse into a condition of hopeless dementia.'

We have thought it well to give a few facts taken from Dr. Tuke's address to show its useful and interesting character. Those who go to the original work will find in Dr. Tuke's well-chosen statistics and sagacious comments valuable information on many points in insanity. That the theme selected for consideration was well suited for his audience soon became evident from the well-sustained discussion which followed the reading of Dr. Tuke's address. It may be said in conclusion that to the able and genial manner in which Dr. Tuke discharged the duties of president of the section much of the success of the meetings was due.

W. W. IRELAND, M.D.

ARTICLE 2377.

Leprosy as a Cause of Blindness. By C. FRED. POLLOCK. London: J. & A. Churchill. 1889.

THIS little book, which is founded upon an examination of 463 lepers in the hospital of Norway, will prove of interest to anyone working at the subject of leprosy, but it does not profess to deal fully with the subject of which it treats; the facts on which it is based appear to have been collected during a summer holiday, which probably accounts for the absence of any original microscopical investigations for which the writer would have been particularly well qualified.

The proportion of cases in which there was some affection of the eyes was large, and nearly 9 per cent. of the total number of lepers were blind. The eyes are usually affected symmetrically, but not simultaneously, and an eye once attacked is nearly always ultimately lost. The mode of attack varied in different cases. A very common condition was a paralytic ectropion followed by dryness of the surface of the eye and opacity of the cornea. Primary affections of the cornea, however, were the most common; these usually commenced as a superficial marginal keratitis, which showed itself either as a smooth infiltration or as a more or less prominent tumour. In either case the affection begins at the periphery and spreads towards the centre. The difference in the corneal affection does not depend on the form of leprosy; indeed, the author considers that the classification into the anæsthetic and tuberous forms is rather arbitrary. Iritis at the corneal affection is exceedingly chronic and intermittent. An exceeding fruitful source of blindness is an insidious iritis in which the ciliary body is rapidly involved.

The book concludes with a summary of forty-one cases. W. ADAMS FROST.

ARTICLE 2378.

Internal Derangements of the Knee-Joint. By HERBERT ALLINGHAM. London: J. & A. Churchill, 11 New Burlington Street. 1889.

OPERATIVE interference with the interior of the knee-joint has been for some little time now a well-recognised surgical procedure. In this book Mr. Allingham has brought together a number of cases in which he and other surgeons have explored this joint for the purpose of remedying internal derangements; therein, the operation having for its object the removal of a dislocated semilunar cartilage, or its replacement in position by means of sutures; in other cases again the joint is opened for the removal of pedunculated or loose cartilages.

The propriety of surgical interference and the methods of cleanly surgery at the time of operation and after it are discussed clearly and accurately. After giving an account of the anatomy of the knee-joint and of its movements, the author details nineteen cases of displacement of the internal semilunar cartilage which have come under his own and other surgeons' observation. In many of these the cartilage is reported to have been mis-shapen, folded, or split. The most common lesion appears to be the tearing away of the anterior extremity from its attachment to the tibia, but the posterior ends, or the whole extent of the cartilage, may undergo a similar separation. The same may be said of the external cartilage, of which six cases of dislocation are reported. These figures are in accordance with the general experience that the internal cartilage, although anatomically more fixed than the external, is more liable to displacement. The diagnostic symptoms of the dislocations are clearly described, and methods for reduction are explained. The old-fashioned manipulation by extension, with internal or external rotation according to the cartilage affected, followed by moderately quick complete extension with local pressure, is advised as the best method.

In recent and acute cases splinting and the application of a plaster-case for six weeks after reduction is recommended. In chronic and recurrent cases the operation of free exposure of the joint cavity by vertical incision on the inner or outer side, to allow of the displaced cartilage being replaced and sutured to the tibia, or in other cases removed, is considered to be generally required. Mr. Allingham advises a vertical incision about three-quarters of an inch from the patella, and opens the synovial cavity freely. He uses catgut for the attachment of the cartilage, and silkworm-gut for sewing up the synovial membrane. A small drainage-tube is kept in the joint only if the cartilage is removed for a couple of days after operation. The details of dressing, &c., are fully given, and do not notably differ from those generally adopted in the modern practice of clean surgery. We imagine, too, that many surgeons will agree with the author that the vertical incision is superior to the horizontal one still used by Mr. Annandale and others, but whether in practice it is found possible, as Mr. Allingham suggests, to thus suture a cartilage by an operation which lies to all intents and purposes outside the joint, may perhaps be doubted.

Nine cases of removal of cartilage by operation, including one in his own practice, are quoted by the author, and twelve cases, including three of his own, of suture, as having resulted satisfactorily. No failures are reported.

The importance of the *ligamenta alaria* as occasional sources of the pain and other symptoms of internal knee derangement is discussed at considerable length. Adopting the views of Dr. Scott Lang as to the frequency with which they are found to be hard and cartilaginous, it is suggested that any deficiency of the internal semilunar cartilage may be made up by a large cartilaginous alar pad, and that this, introduced as it is between the femur and the semilunar cartilage, may give rise to symptoms of internal derangement. That the ligament is so placed that it can be pinched, can be shown on the dead body. Mr. Allingham, however, brings forward only two cases of operation in which this condition was found on opening the joint, and there appears no good reason for making an especial variety of internal derangement due to abnormalities of these so-called ligaments, as distinguished from the rest of the group of synovial fringes, and pedunculated thickenings, which are sufficiently common. In any case exact diagnosis can be hardly possible until the joint cavity is opened and exposed.

The remaining chapters, V. and VI., are concerned with the characteristic features, symptoms, and treatment of loose and pedunculated cartilages, synovial fringes, and the like, and with *hydrops articuli.*

With regard to the operative treatment of loose cartilage, we are doubtful if Mr. Howard Marsh would *now* advise the squeezing the body into the subsynovial tissue by subcutaneous incision of the capsule, there to contract adhesions. Direct incision and removal is, we imagine, the general practice whenever the body can be identified and fixed by the operator. It will not be found also, as we believe, that it is generally necessary to open the joint so freely as Mr. Allingham advises. The incision can always be enlarged in the course of the operation, and it is often easy to extract the loose cartilage through an aperture so small that the wound heals up straightway. In *hydrops articuli,* not induced by the presence of fringes, or definite inflammatory change, it is suggested that the joint should be opened and continuously drained in the same manner as that now frequently employed for hydrocele of the tunica vaginalis.

The work, taken altogether, is undoubtedly a careful and accurate contribution to this particular branch of regional surgery, and the accounts of recent experience of operation in internal derangements of the knee, the record of cases, and the description of the treatment now adopted, cannot fail to make it a very useful work of reference.

WALTER PYE.

ARTICLE 2379.

Chronic Bronchitis and its Treatment. A Clinical Study. By WM. MURRELL, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital, &c. London: H. K. Lewis. 1889.

A RECORD of clinical experience in the treatment of so common a disease as chronic bronchitis comes very opportunely at this season. We hear now and again of the progress that has been effected in devising measures for the relief of the symptoms of this distressing ailment, but practitioners often lack the means of forming a reliable opinion as to the relative value of the various methods of treatment brought from time to time to their notice, and as to the precise indications for, and the effect of, particular medications. The unpretentious little work now before us appears to contain exactly this kind of information. It is a simple record of clinical work extending over a period of about ten years, during which time the author has had abundant opportunities of watching the effects of the different agents employed for the relief of this affection, and gauging their value. The perusal of the work leaves the impression that most plans of treatment have something to recommend them, but that the great difficulty is to ascertain the precise conditions under which one or the other is indicated. The remedies, indeed, are, for the most part, familiar enough, and the merit of the author is to have established by painstaking clinical observations the circumstances under which one or other of them is to be preferred. Given the large proportion of cases contributed by this class of affections, such a work cannot fail to be instructive, and the author has taken care to make it interesting. It is easy, agreeable reading, and affords an insight into the treatment of these diseases which only years of experience could confer.

NOTES ON BOOKS.

ARTICLE 2380.

Report of the District Lunacy Boards of the Glasgow, Govan, and Lanark Lunacy Districts for Kirkland Asylum.

FROM the Annual Report of this Asylum for the year 1888-89, it appears that there were in May last 218 patients. The total number under treatment during the year was 295; the daily average number was 220. The recovery rate was 48·7 per cent. of the admissions, and the death-rate was 5·4 on the average number resident, and 4 per cent. on the total number under treatment. This low mortality is very creditable to the superintendent, Dr. A. Campbell Clark, as he observes the asylum in its present situation has been only a makeshift. The plans of a new asylum, which is to be erected near Shotts, were exhibited at the last meeting of the Medico-Psychological Association in Edinburgh. While diligent in attending to all his medical and administrative duties, Dr. Clark has paid special attention to the training of the asylum staff, and has been the means of calling increased attention to this duty in institutions of the kind.

The work of training, observes Dr. Clark, consists of lectures, instructions in the wards, practical demonstrations in bandaging, dressing wounds, making poultices and fomentations, what to do in emergencies, and all the manipulations of nursing. The attendants and nurses have each a certain number of patients allotted to them for observations, and regarding these they make written reports. The lectures are given fortnightly, beginning in October and ending in April. Four examinations—two oral, one practical, and one written—are held, and certificates and prizes are given in April. By such means the faculty of observation is educated and developed, the patients are individually focussed, better cared for and better understood.

I remember perusing several of the essays written by the attendants which contained some valuable observations on hallucinations, for the attendants, being more constantly with the patients, have opportunities of studying the delusions of those under their charge more closely than the medical superintendent.

W. W. IRELAND, M.D.

ARTICLE 2381.

Sixty-second Annual Report of James Murray's Royal Asylum, Perth. 1889.

WE learn from Dr. Urquhart's Report that there were in this Asylum, at the end of May 1889, 104 patients, which corresponds to the daily average of the year. There had been thirty-eight admissions, thirty discharges, and six deaths.

The Murray Asylum, which occupies a fine situation on a hill near Perth, is the only one of the Royal Asylums in Scotland which has not got a pauper establishment adjoining to it. This was owing to the opposition of the late superintendent, Dr. W. Lauder Lindsay, who did not look favourably on the conjunction of private patients of the better class and pauper lunatics. In consequence of his representations the Perth District Asylum was located at Murthly. From the remarks in the course of Dr. Urquhart's report we select the following:—

'The physician, then, while relying on the strong arm of the law to aid him in his endeavours to promote the good of his patient and the common weal, is confronted with problems of life and mind that are surely becoming less difficult and less perplexing to our slowly widening knowledge. The innate tendency to insanity is to be the subject of his solicitude and study just as much as the overt symptoms that lead to active treatment. Nay, it is a question of vital importance how disease may be prevented, when the whole organism is prone to disorder. Just as we should advise the careful nurture of one by heredity disposed to consumption, so we should care for the education, in the widest sense, of the mentally unstable. Will the time come when "the marriages made in heaven shall be revised in the consulting-room?" Surely the time has come when the sanitation of the mind well deserves a part of the attention that is devoted to the hygiene of the body. *Mens sana in corpore sano.* How long has it been repeated, how little acted upon! One scarcely cares to write it, so trite has it become. Yet we find the Imperial Parliament of to-day altogether busied with imposing hindrances, limitations, and disabilities on the work of the medical profession in this great cause.'

W. W. IRELAND, M.D.

ARTICLE 2382.

THE modest *Contribution à l'Etude du Lait*, by Dr. Vézier, bearing more particularly on the question of hand-fed infants, discusses the chemical changes which milk undergoes when exposed, for ever so short a time, to the air, and describes the various methods of demonstrating the composition and modifications of fresh and contaminated milk. He concludes that the most efficacious method of reducing to a minimum the inconveniences almost inseparable from recourse to any other than the maternal supply is to boil the milk for at least a quarter of an hour, preserving it thenceforth in hermetically stoppered receptacles. He denies that the process of ebullition modifies the nutritive qualities of the milk—a very generally received idea—or that it affects its digestibility. Moreover, this method of sterilisation suffices, with a little care and attention, to remove the more obvious dangers.

ARTICLE 2383.

MR. C. T. KINGZETT, F.I.C., F.C.S., &c., calls attention in a little *brochure* to 'The Chemical and Therapeutic Properties of Peroxide of Hydrogen' (hydroxyl). Since Mr. Kingzett discovered a means of producing peroxide of hydrogen as a stable compound it has been found useful in many departments of the arts and of medicine. The latter concerns us more immediately, and its most noteworthy property is that of a powerful antiseptic and deodoriser, this property being due to the nascent oxygen disengaged when it undergoes the change into water. Added to substances capable of putrefaction, all septic changes are prevented, and this fact renders it exceedingly useful as a mouth-wash and gargle in diphtheria, &c., and as a wash for wounds. Diluted with water and sprinkled on the floor in sick rooms it immediately removes all noxious emanations, and purifies the air in a way no other agent can do. In fact, we have little doubt that this stable product will find a wide sphere of utility in prophylactic and curative medicine.

ARTICLE 2384.

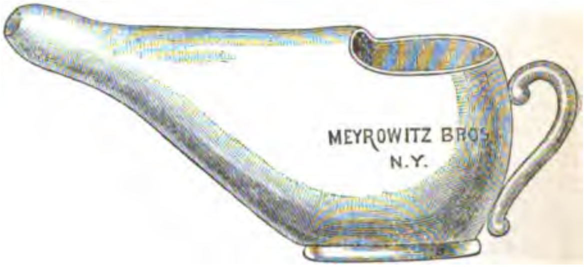
On the Animal Alkaloids. By SIR W. AITKEN, M.D., F.R.S. Second Edition. London: H. K. Lewis. 1889.

THE subject of the animal alkaloids, ptomaines, leucomaines, and extractives, is so comparatively modern that this little work, which deals with them from a practical point of view, is likely to be very popular, and indeed that it is so already is evidenced by the fact that a second edition has been called for in a very short time. In this edition the author has spared no pains to bring his work up to date, the journals and current medical periodicals having been freely laid under contribution. The subject is one of intense interest and great importance, and those who are anxious to refresh their knowledge would do well to read this little volume.

NEW INVENTIONS.

A NEW NASAL DOUCHE CUP.

SO much has been written regarding the danger of middle-ear catarrh from the use of nasal douches, as well as the inconvenience of applying them in the ordinary manner, that Dr. Leonard A. Dessar, of New York, has endeavoured to construct an instrument which, to a great extent, obviates these disagreeable features.



It consists of a cup made of glass, the nozzle being made to fit into the nostril, and the fluid introduced into the nose by inclining the head somewhat forward, the mouth being kept open. The illustration conveys a correct representation of the cup, which is about double the size of the cut. The cup, with full instructions for use, can be obtained from Meyrowitz Brothers, manufacturers of surgical instruments, 295 and 297, Fourth Avenue, New York, U.S.A.

PATENTS.

[*This list is specially compiled for the* LONDON MEDICAL RECORDER by Messrs. RAYNER & CASSELL, *Patent Agents, of* 37 *Chancery Lane, London, W.C., from whom all information relating to Patents may be had gratuitously.*]

18,052. Improvements in and relating to the construction of trusses. JOEL SIMPSON BLACKBURN, 77 Chancery Lane, London, Nov. 12.

18,233. Improvements in respirators. ISAAC ARROWSMITH BEST, 12 Cherry Street, Birmingham, Nov. 15.

18,298. Improvements in the shaping of spiral elastic belts or elastic abdominal supporters. SARAH ANN BOUJEAURD, 37 Chancery Lane, London, Nov. 16.

18,334. Improvements in and in connection with accouchement and menstrual pads or bandages. LAURETTA ARUNDEL, 3 Poets' Corner, Westminster.

18,397. Improvements in dental engines. JOHN ELLIS, Suffolk House, Lawrence Pountney Hill, London, Nov. 18.

18,418. Improvements in surgical instruments for introducing India-rubber or other tubing into wounds or cavities of the human body. ALBERT E. DAVIS, 323 High Holborn, Middlesex, Nov. 18.

18,450. Improvements in recumbent hospital and invalid rotating chair-bed-equipoise-equipment, comprising a rotating wheel couch, table, chair, and bed, complete in one ornamental equipage. CALEB LOADER, Coylton Terrace, Wincanton, Bath, Nov. 19.

18,799. Improvements in root trimmers for dental purposes. BENJAMIN JAMES, Bing, Nov. 20.

18,821. Improvements in electric baths or apparatus for applying electricity for medical or other similar purposes. GUSTAV GAERTNER, 47 Lincoln's Inn Fields, London, Nov. 20.

18,845. Improvements in the manufacture of medicinal lozenges and the like. THOMAS FRANCIS EDGEWORTH, 45 Southampton Buildings, London.

19,063. Improvements in table for invalids' use. JANE O'DONNELL, 6 Bank Street, Manchester, Nov. 27.

19,656. Improvements in surgical splints, leg irons, and the like. FREDERICK OSBORNE SMITH, 47 Lincoln's Inn Fields, London, Nov. 6.

SPECIFICATIONS PUBLISHED.

18,921. STEEDMAN & KIRKPATRICK. Chlorine. 1888. 4*d.*

556. WILKINSON. Joint for surgical elastic appliances. 1889. 6*d.*

1,601. BAINES. Spectacles. 1889. 6*d.*

5,338. DYER. Belt and pad for rupture. 1889. 6*d.*

The above specifications published, may be had of Messrs. Rayner & Cassell, Patent Agents.

GOSSIP.

METHYL-BENZO-SULPHINIC ACID is said to possess a sweetening power many times superior to that of saccharin.

LEACHE recommends an ointment containing one part of iodoform in eight of lanoline, in the treatment of sycosis of the beard.

THE University of Pennsylvania has thrown open all its classes, including those in the Medical Department, to women.

DR. F. BRAMANN, who performed tracheotomy on the late Emperor Frederick, has declined a call to Greifswald as Extraordinary Professor of Surgery.

DR. HANS VIRCHOW, son of the celebrated pathologist, has been appointed Extraordinary Professor of Anatomy in the University of Berlin.

DR. SCHEDE, of Hamburg, a former assistant of the late Professor R. von Volkmann, will probably succeed that lamented surgeon in the chair of surgery at Halle.

THE University of Heidelberg is to have a Hygienic Institute. It will be under the direction of Professor Knauff.

FIVE hundred and four persons passed the *Staatsexamen* (the 'one portal' to the medical profession in Germany) during the official year 1888-89 in Prussia, and 376 in Bavaria.

A NEW anatomical institute was opened in the University of Innsbrück last month. Dr. Joseph Öllacher gave an address on the history of the Chair of Anatomy at Innsbrück, which is more than 200 years old.

DR. ADOLF BAGINSKY, *Privat-docent* in Children's Diseases in the University of Berlin, and author of a huge book on that subject which has lately appeared, is to be the Medical Director of a new Children's Hospital shortly to be opened in Berlin.

TWO of the medical professors in the famous University of Salamanca—Dr. Sanchez, incumbent of the Chair of Clinical Medicine, and Dr. Lorenzo, occupant of that of Clinical Surgery—have just been made Knights Commanders of the Order of Christ.

ONE of the last acts of the late Imperial Government of Brazil was to instruct all presidents of provinces to institute criminal proceedings against all persons practising medicine without legal title in their respective districts.

STEPS are being taken for the creation of a Senate of medico-legal experts in Hungary. This body will consist of fifteen members, whose duty it will be to report to the Minister of Justice on all cases in which law requires the aid of medical science.

THE alarming increase of venereal disease in Italy has led the Minister of the Interior to appoint a commission to investigate the subject, and if possible devise means for the repression of syphilis and prostitution. The Italian medical journals think it probable that the legal enactments formerly in force will be renewed, as it is to their repeal that the present increase of the two evils in question is chiefly due.

AT the opening meeting of the Spanish Gynæological Society on Dec. 4, Dr. Enrique Olivan y Sanz delivered an inaugural discourse, the title of which sufficiently describes its purport:—'Certain reflections tending to show that the confidence which is at present inspired by anæsthetics and the use of modern antiseptic methods neither justifies nor excuses the performance, nowadays too common, of intra-abdominal operations, and especially of those termed exploratory laparotomies.'

DURING the first half of the current year there were 8,880 births and 10,062 deaths in Madrid, showing a net loss to the population of 1,182. Of the children born, 4,657 were boys and 4,313 girls. Of the persons who died, 5,217 were males and 4,785 females. Of the births no fewer than 2,253 were illegitimate, being nearly 25 per cent. The Spanish capital can hardly be congratulated on these vital statistics.

QUEEN'S COLLEGE, BIRMINGHAM.—There are at the present time several entrance Scholarships awarded by the College. These, however, are all confined to the sons of medical men. At a recent meeting the Council decided, in view of the present satisfactory growth of the School, to establish an open entrance Scholarship of the value of £31 10*s.* The examination for the Scholarship will be held each October, and the subjects will be Latin, French, or German, Mathematics, Chemistry of Non-metals, and Elementary Biology.

THE adulteration of wines and the manufacture of artificial liquors appears to be a flourishing industry in Brazil. Among other noxious substances used for the purpose are the following: Indigo carmine, dinitrocresylate of potassium, aloes, chloroform, derivatives of valeric, butyric, and cupric acids, with oxalic acid, and amylic acid. The philanthropic persons who, possibly for the purpose of promoting the cause of temperance, offer this stuff to a confiding public are to be severely dealt with.

Russian Universities.

THE medical faculty is more flourishing than any of the sister faculties in all the Russian Universities this session. At Dorpat, of a total of 1,741 students, 799 are medical and 118 pharmaceutical. At Charkow nearly all the new entries are in the medical faculty, and the same thing may, without very much exaggeration, be said of Moscow. At Kasan, of a total of 140 new students, 64 are medical. At Helsingfors there are 133 students in the faculty of medicine, two of them being women.

Hypnotism and Labour.

A CASE was related in the last number of the *Recorder* (p. 456) in which hypnotic suggestion before labour was employed by a Spanish physician as a means of hastening the process and mitigating the pain of it. It appears that Dr. Fanton, of Marseilles, is in the habit of delivering women during the hypnotic sleep. He has done this for some time with almost uniform success. Almost his only failure seems to have been due to a misunderstanding on the part of the patient; the 'suggestion' to have no *pain* was interpreted by her as an order to have no *pains*, and uterine contractions accordingly ceased for four hours.

Hospitals at Coimbra.

Dr. Augusto Rocha, Lecturer on General Pathology and Director of the Microbiological Laboratory in the University of Coimbra, and editor of the *Coimbra Medica*, has been commissioned by the Portuguese Government to visit the principal hospitals in foreign countries and report on their sanitary arrangements, management, &c., with the view of furnishing suggestions for the construction of the University hospitals of Coimbra which are about to be rebuilt. From the accounts of their present condition given in the Portuguese papers, these institutions are in such a condition that if they are not pulled down before long they will save the authorities the trouble of doing so by crumbling to ruins.

Prizes.

The Spanish Medico-Chirurgical Academy offers prizes for the best essays on the following subjects:—1. Modern Discoveries in Physics applied to Medicine: have they advanced the Science of Diagnosis? 2. The Limits of the Expectant Method and the Therapeutic Value of Hygiene in Chronic Diseases of the Stomach. Each prize will consist of 250 *pesetas* (£10), with the title of Corresponding Member of the Academy. Essays may be written in Spanish, Portuguese, French, Italian, German, or English. Each essay must be authenticated with a motto, the name and address of the author being sent in a separate sealed envelope bearing the same motto. All essays must be in the hands of the Secretary of the Academy on or before Sept. 15, 1890. The address is—Montera, 22 *bajo*, Madrid.

A Year's Work at the Pasteur Institute.

The official report just published of the antirabic inoculations performed at the Pasteur Institute in Paris shows that from Nov. 1, 1888, to Nov. 1, 1889, Professor Grancher, with his assistants Drs. Chantemesse and Charrin, have had under their care 1,830 persons, French and foreign. Of these 11 died of hydrophobia in spite of the treatment, being at the rate of 0·60 per cent. From this number, however, should be deducted 4 patients who died during the treatment or within a fortnight of its termination; this brings the mortality down to 0·38 per cent., a rate which is lower than that of any previous year. M. Pasteur points out that the rate of mortality among persons bitten by animals certified as rabid by veterinary surgeons, is precisely the same as that among those bitten by animals proved to be so by inoculation; this fact shows that the veterinary certificate may be accepted as trustworthy evidence of the genuineness of the disease.

Antisepsis in Excelsis.

The fear of microbes which is rapidly becoming a dominant factor in modern life has lately received a curious illustration at Nordhausen, a small town in Prussian Saxony. A municipal edict has been issued that all barbers, hairdressers, and 'tonsorial artists' generally shall under legal penalties well and truly disinfect their instruments every time after they have been used. This is no doubt a step in the right direction, but it is to be hoped that these enlightened councillors will not stop here in their career of sanitary progress. As so many doctors in Germany are at present perforce in the ranks of the 'unemployed,' why should they not be invited to revive in their own persons the defunct order of 'Barber-Surgeons'? The idea of the Nordhausen municipality could then be carried out in a manner befitting its importance. Shaving might be performed as a surgical operation with all due antiseptic rites and ceremonies, the chin being afterwards dusted with 'double cyanide' instead of violet powder. The carbolic spray would, of course, replace the orthodox 'blow' of bay rum. When 'Hair-cutting on Listerian Principles' meets the eye on every hairdresser's signboard, the illustrious founder of the antiseptic system may sing his *Nunc dimittis* with the proud consciousness that he has not lived in vain.

Leprosy in Spain.

Dr. José E. Olavide, physician to the Hospital de San Juan de Dios at Madrid, gives an account of leprosy as it exists in Spain at the present day (*Revista Clínica de los Hospitales*, December 1889). He says that there are always from six to eight lepers in that hospital who have come to the capital from some of the infected districts for treatment. Once admitted, they are, in accordance with recent legislation, kept in the hospital till their death. No single instance of contagion is known to have occurred in the hospital; nor of the 500 lepers whom Dr. Olavide has had under his care during twenty-five years of practice has he known more than one who attributed his disease to contagion. In Spain there are both imported and native lepers, the total number, according to Dr. Olavide, being between 1,000 and 1,500. An official census was spoken of two or three years ago, but the idea was given up, as it was thought the difficulties of diagnosis, due to the ignorance of the Spanish doctors on skin diseases, would make it impossible to collect reliable statistics. The imported lepers are chiefly natives of Spain, who have contracted the disease in the Philippine or Canary Islands or in Cuba. In connection with this Dr. Olavide points out that in all cases leprosy has been acquired in the interior, never in the capital towns, of these islands. In Spain itself, on the other hand, the leprous foci are not in the interior but near the sea—not absolutely on the coast, but only a few leagues inland. In the south, the Mediterranean provinces of Almería, Murcia, and Granada, and in the north those of Galicia and Asturias, supply the largest contingent of lepers. The disease is not known in the Basque Provinces or in that of Santander, in spite of the free communication between them and America and Oceania. In the interior, Dr. Olavide only knows of a few foci in the provinces of Jaén, Cordova, and Guadalajara. The patients are chiefly missionaries and soldiers. The former usually assign bad food, residence in marshy places, and the latter intercourse with native women, as the cause of their disease. Dr. Olavide strongly urges on all Governments the necessity of appointing commissions of pathological experts to study the disease in the places where it is most rife.

A Psychological Museum.

A new departure in museums is announced from Florence, where a 'Psychological Museum' for the collection and display of 'all documents serving to illustrate human passions,' has been established by Ministerial Decree. Professor Mantegazza is to be the director of the new institution, and courses of instruction are to be given there on 'experimental psychology.' What the precise scope of this last branch of science may be we do not altogether understand, but some help towards a solution of the problem may perhaps be furnished by the fact that a 'Society of Experimental Psychology,' which has been established at Berlin since 1888, concerns itself chiefly with the study of hypnotism.

'Drunk or Dying.'

These cases are among the most difficult to deal with that can occur in hospital practice, and it is no wonder that young house surgeons dread the very name of them, associated as it often is with offensive remarks at inquests and abusive newspaper paragraphs. Some excellent remarks on the subject were not long ago made by Mr. Durham at Guy's Hospital, from which we extract the following 'aphorisms' as likely to be useful to practitioners who are by way of being called upon to treat 'drunk or dying' cases. After saying that in any doubtful case it is best to err on the safe side, Mr. Durham went on to point out that the cases might be divided into three classes:—1st. Those who lay quietly and comfortably in bed upon their backs remembering little of the accident, but quite happy. 2nd. Those who tossed the clothes off, were irritable, refused medicine, and would not lie still. 3rd. Those who lay exactly where they were put, whether the position was a comfortable one or not. Of the first class no fears need be felt; they would probably do well. The second should be regarded with suspicion. Of the third there was cause for the gravest anxiety.

A National Leprosy Fund.

It is announced that the Prince of Wales will take the chair at a public dinner at the Hôtel Métropole on Monday, Jan. 13, for the purpose of appealing to public sympathy to aid in the promotion of a National Leprosy Fund. It is proposed that the interest arising from such fund should be devoted to the medical treatment and care of indigent lepers in the British Empire, and that a sum of money be set apart and placed under the control of trustees for the endowment of two studentships, one student to make the United Kingdom and the remainder of Europe his field of investigation, and the other to go abroad and study the disease in India, China, the colonies, and elsewhere. It was certainly high time that the Damien Memorial Committee should give some sign of its continued existence, for, since its meteor-like flashing on the public eye immediately after the death of the martyr of Molokai, nothing has been seen or heard of it. So protracted, indeed, was the period of suspended animation that people, both here and in India, were beginning to say of the committee, as Elijah said of the false god, 'Peradventure he sleepeth and must be awakened!' It is to be hoped that this time something will really be done, as the question of leprosy, though it seems so remote from us, is one of most pressing importance for millions of our fellow subjects, and might under perfectly conceivable circumstances become so for our descendants, if not for ourselves. It is to be hoped also that enough money will be forthcoming to provide prizes of sufficient magnitude to attract scientific men who have already given proof of first-rate ability in such researches. Travelling studentships are all very well, but we are not aware that the holders of them have ever discovered anything in particular. What are wanted are prizes which might tempt such men as Armauer Hansen, Robert Koch, or even the great Achilles of bacteriology, Louis Pasteur himself, into the field.

A Bacteriological Institute for England.

The General Committee of the Pasteur Institute Mansion House Fund appointed a sub-committee on Nov. 6 to consider the expediency of establishing a Bacteriological Institute in connection with the University of Cambridge. The sub-committee answered the question thus propounded to them emphatically in the affirmative in a report which was adopted by the general committee on December 5. An acting committee has been appointed to carry into effect the recommendations embodied in the report. The institution, which it is proposed to call the 'Bacteriological Institute of Preventive Medicine,' is to have the following objects;—'1. The preparation of the material which has been found successful for preventive inoculation against such diseases as rabies, anthrax, quarter evil, &c. 2. The carrying out of inoculations against such diseases, in which the necessary operations require to be performed by trained men of science. 3. To send out, with due precautions, to those requiring it, the modified virus to protect against diseases of animals. 4. To carry out investigations fitted to increase our knowledge of the nature of disease-producing microbes with a view to improve the hygienic measures by which infectious diseases may be prevented.' The reasons which have led to the selection of Cambridge as the most suitable 'local habitation' of the proposed institute are the following (to quote once more the words of the report):—'1. It will be possible in Cambridge to affiliate the institute to one of the largest and best equipped pathological laboratories in England. 2. The association of the institute with one of the larger universities would be a guarantee that the work carried out at such an institute would maintain a high scientific standard. 3. The railway communication between London and Cambridge is good—one hour and a quarter only being required for the journey. Cambridge, moreover, is so placed that it is easily accessible from all parts of England.' As the British public is not yet educated up to a sufficiently high scientific level to lead to the hope that such an institution could trust to voluntary subscriptions for support, an endeavour is being made to secure at least a temporary endowment for it from some of the scientific societies. The probable annual expenses are estimated to be about £1,500. Of this sum it is hoped that the British Medical Association, the Royal Society, and the Royal Agricultural Society will each contribute £300, and the Agricultural Board is believed to be 'good' for a like amount. The remainder is expected to be provided by private philanthropy, assisted we should imagine in some measure by the institute itself in its business capacity, for there is no reason why a charge should not be made for the prepared virus sent out and for the inoculations.

LITERARY INTELLIGENCE.

A German translation, by Dr. Karl Abel and Dr. Theodor Landau, of Dr. John Williams's 'Lectures on Cancer of the Uterus' has appeared. It is published by A. Hirschwald, of Berlin.—An important work on the bibliography of venereal disease, by Dr. J. K. Prosch (of Vienna), is now in course of publication. The first volume appeared in October; the second and third will be published in 1890. The full title of the work is *Die Litteratur über die venerischen Krankheiten von den ersten Schriften über Syphilis aus dem Ende des fünfzehnten Jahrhunderts an bis in die Gegenwart*; it will form, when complete, an index to all extant syphilographic literature. The book is published by P. Hanstein, of Bonn.—Dr. Jaime Ferrán y Clua (Director of the Municipal Microbiological Laboratory of Barcelona, whose name was much bruited about some years ago in connection with 'anticholeraic' inoculations in Spain), has published a work on the prevention of rabies, entitled *Estudios sobre la Rabia y su Profilaxis*, 1887 à 1889.—*Le Morphinisme*, by M. G. Pichon (Paris: O. Doin), contains a very complete account of this latter-day vice. The book is of absorbing interest for medical men, not only on account of the scientific matter it contains, but for the melancholy reason that the morphia demon finds fully half its victims among doctors and their wives.—A work has just been published at Seville, under the title of *Conferencias leidas por los Profesores en el curso de* 1888 à 1889, which gives a favourable idea of the scientific activity of that medical school. It contains essays on Tubercular Phthisis; on Chronic Inflammations of the Uterine Mucous Membrane, by Dr. Dominguez Adame; on Salpingitis, and on Fracture of the Surgical Neck of the Femur and of the Patella, by Dr. Federico Rubio; on Moral Responsibility from the Medico-Legal Point of View, by Dr. Vazquez; on Granular Pharynx, by Dr. Sota y Lastra; and on Eclampsia, by Dr. Tello.—Dr. Paul Guttmann's well-known *Manual of Clinical Examination* has been translated into Japanese by Dr. Hasegawa.—Our esteemed Italian contemporary *Il Progresso Medico* has hit on a plan for stimulating its subscribers to punctuality in 'paying up,' which seems to be an adaptation in the sedate sphere of medical journalism of methods at present much in favour with less grave and respectable prints. To all who pay their subscriptions within the first two months of the year a book, said to be of the value of 10 lire, is offered as a reward for their superior virtue. The book is entitled *Osservazioni di Patologia e Clinica Chirurgica sui casi più importanti della Clinica del Prof. A. d'Antona, raccolte dal Dott. Pascale* (Pathological and Clinical Observations on the most important cases in the clinique of Professor A. D'Antona, collected by Dr. Pascale).

At a meeting of the New York Medico-Legal Society, held November 20, Dr. Phillip E. Donlin, deputy coroner, who read a paper on 'The Pathology of Death by Electricity,' exhibited the larynx of the lineman Feeks, whose tragic death on a telegraph pole excited so much attention in that city. It presented striking evidences of the injuries received from the fatal wire.